5-Year Warranty: *A Special Report . . . . . Pp. 11-12*

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The Newspaper of the Industry
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March 6, 1961

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114 Supply Specs on Air Conditioners

* * *

Only 1 Traffic Light In Town, But 11 Air Conditioned Businesses

By George M. Hanning

HARPER, Kan.—Three years ago the only air conditioned business in this south Kansas town of slightly fewer than 2,000 residents was the local bank. It was partially cooled by an 8-ton Carrier unit.

Today, Harper boasts 11 centrally air conditioned business establishments, nine of them congregated in the central business district which stretches one block each way from the town's only traffic light at Central and Main (or 10th St.).

By the end of this season, prospects are good that several more stores will be air conditioned.

What has made this small rural shopping center 45 miles southwest of Wichita so air conditioning conscious?

Biggest share of the credit must go to big Bill Webber, who sold and installed eight of the 11 jobs—six last year.

But he has had strong assists from:

1. Bob Bolitho, energetic editor of the weekly Harper *Advocate,* who sees a bright future for a growing Harper, with attractive air conditioned stores as a means to that growth.

2. L. D. Banta, a progressive local banker who believes the

(Continued on Page 55, Col. 1)

Republic-Transcon Purchases Mathes

BEVERLY HILLS, Calif.—Republic - Transcon Industries, Inc., said to be one of the nation's largest manufacturers of water heaters and other appliances, is purchasing The Mathes Co. division of Glen Alden Corp., manufacturer of residential, commercial, and industrial air conditioning and heating equipment.

This was announced by Milton J. Stevens, board chairman of Republic-Transcon, and Albert A. List, chairman and president of Glen Alden.

"We propose to strengthen and expand the Mathes production and sales effort," Stevens

(Continued on Back Page, Col. 1)

Bell & Gossett Integrates Design

MORTON GROVE, Ill.—By "integrating" its design, Bell & Gossett Co. is now offering a wide range of motor-compressors, condensing units, and packaged liquid chillers assembled from five basic compressors and stocked motors,

(Continued on Page 4, Col. 3)

Inside Dope

By GEORGE F. TAUBENECK

Learn to live and laugh — thus delay your epitaph

The History Professor Who Abuses Businessmen

News that Prof. Arthur Schlesinger, Jr. (of Harvard, naturally) has been given some sort of amorphus appointment at the White House has resurrected a few presumably dead cats.

Prof. Schlesinger, whose specialty is history, is a business-baiter. He is especially nasty about advertising and selling.

Almost at the same time that Schlesinger's retainer was announced, however, President Kennedy tempered it by writing to the Advertising Federation of America:

"I hope that your Washington Conference will accomplish its stated objective of establishing a closer relationship between government and industry, and create a better understanding of advertising as a dynamic force in the national economy."

All of which, we trust, will preface the following correspondence.

Wendt Advertising Agency
Toledo, Ohio

Editor:

Have been meaning for some months to drop you a line complimenting you on your column, "Harvard Professors Mislead the Public." It should be required reading in every high school and college in the land.

What focused my attention on it again was a line in a syndicated columnist's column recently to the effect that one of these left-wingers who live in a world of their own—Arthur Schlesinger, Jr.—was being seriously

(Continued on Page 32, Col. 1)

There's a Growing Demand Today For Simple A-C Systems

(Conscience of the Industry Editorial by George F. Taubeneck)

AIR CONDITIONING had its beginnings in processing control for industry. (Incidentally, that still is an important market). Being a relatively young business, many of its engineers have been trained in that exacting school.

Homeowners and commercial users, however, do not have such precise standards. They want simple systems, easy to install and operate. And they rebel against the high costs of perfection!

Their attitude is showing up in the marketplace.

According to one General Manager, "our engineers have been turning out stuff to impress other engineers, rather than goods the public will buy. Technically our products

(Continued on page 14)

Jury Acquits Salesman Accused Of Engineering Without License

By Frank J. Versagi

NEW CITY, N. Y.—An air conditioning salesman was acquitted here after a jury trial on the charge of practicing engineering without a license. The job was a bowling alley using well water for cooling, hot water for heating, no refrigeration compressors.

The charge, which was instigated by the Ethical Practices Committee of the New York State Professional Engineers Society against Milton Markowitz, resulted in a criminal court trial here at the Rockland County courthouse. Markowitz, now employed by Cold Wave Cooling, New York City, was salesman for S & M Schwartz, an air conditioning contracting firm in Brooklyn, at the time of the installation involved in the trial.

According to Markowitz, Milton Adler, acting for the attorney - general's office, attempted to show that the heating and air conditioning installation was unsafe. One aspect of the allegation was that the plenum effect formed by the false ceiling made a natural pathway for the spread of fire.

An inspector testified, the

(Continued on Back Page, Col. 4)

Later issues of the NEWS will explore in detail the several factors in the Markowitz case and present the broad ramifications of the subject.

Worthington Unveils Part of New Line

HARRISON, N. J.—The Air Conditioning Div. of Worthington Corp. has announced some of the new products in its "Full Choice Air Conditioning" line.

These include a twin-duct air blender, a packaged multizone unit, a "Roofair" for roof-mounted cooling or heating, and a new line of ventilating fans.

The twin-duct air blender has been designed for high velocity

(Continued on Page 75, Col. 1)

✓ INSIDE

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Most Brands Yet Compete for '61 Buyer's Dollar

By George M. Hanning

DETROIT — If participation in the NEWS' ninth annual compilation of packaged air conditioning equipment specifications is any criteria, more brands of equipment will compete for the consumer's air conditioning dollar in 1961 than ever before.

In the pages of this issue will be found data supplied by 114 marketers of residential and commercial packaged air conditioners, residential and commercial split systems, heat pumps, and packaged liquid chillers for air conditioning applications.

They, coupled with the *additional* 17 manufacturers of room air conditioners whose specifications appeared in the Jan. 30 special room air conditioner issue of the NEWS, represent a record total—131 as compared with 124 in the 1960 Air Conditioning Showcase Issue.

Between the covers of this issue will be found specifications supplied by manufacturers themselves on 89 lines of split systems, 79 lines of packaged unitary equipment, 59 lines of heat pumps, and 32 lines of liquid chillers.

This, the NEWS believes, is the most complete listing to be found anywhere of what the industry has to offer this year. Listings are confined to packaged units—those that have a compressor as part of the package. They do not include separate lines of condensers or of air handling units without compressors. Only exception is gas powered packaged equipment.

All major nationally distributed brands in these equipment categories are included here. So are most of those offered on a regional scale. Yet at least a dozen other firms are known to be marketing packaged air conditioning equipment this year. Others are believed to be doing so.

Comparing our 1961 compila-

(Continued on Page 20, Col. 4)

Editor's Note:

The NEWS can't guarantee that the specifications of 1961 unitary air conditioning equipment published in this issue will be completely free from error. However, anyone acquainted with the work of Assistant Editor George Hanning knows the thoughtful and meticulous approach he takes on any project. Since he handles the entire job of collecting, collating, and preparing specifications for publication, we are confident the best possible job is being done, and believe the thousands who find specifications useful should add their thanks to George along with ours.

January Awards for New Construction Rose 15% To Establish Record for Month

NEW YORK CITY—F. W. Dodge Corp., construction news agency, had some good news to announce last week.

Awards of contracts for new construction in January, the agency said, rose 15% over January, 1960, to a record for the month, with all three major categories—residential building, non-residential building, and heavy engineering — participating in the advance.

Commented George Cline Smith, vice president and chief economist of Dodge:

"The high level of contracts in January lends further support to our earlier expectation that construction would be the brightest spot in the economy in 1961, and would prove instrumental in reversing the current decline in general business activity."

Residential building awards in January totaled $973,803,000, a gain of 5% from a year earlier. This gain was registered despite a 12% decline in single-family dwelling contracts. Awards for hotels and apartment structures rose 14% to more than offset the continued lag in awards for one-family houses.

Edwin Magee, Dodge economist, said the agency's forecast on housing starts this year remains the same as its late 1960 prediction of a gain of 5% to 1,325,000.

In the non-residential building category, January awards climbed 1% over January, 1960, to $813,245,000.

Dodge said awards for hospitals and public buildings showed a sharp gain and contracts for education buildings registered a modest increase. Contracts for manufacturing facilities and for commercial structures, however, were off 15% and 3%, respectively.

Contracts for heavy engineering totaled $698,002,000, a gain of 50%. Awards in this category were aided by government spending during January.

Harry G. Hoffman Dies

SPRINGFIELD, Mo. — Harry G. Hoffman, a partner in Hoffman Supply Co. here, refrigeration and air conditioning supplies wholesaler, died Jan. 28 following an operation. He was a past chairman of Region #7, ARW.

Mueller Climatrol President Sees Need for Replacement Market

CHICAGO — Charging that the present course of product and sales planning by manufacturers in the residential heating and air conditioning market will only perpetuate the present "price, product, and profit deterioration," H. P. "Hap" Mueller, Jr., president of Mueller Climatrol, Div. of Worthington Corp., has called upon the industry to design products and engage in industry-wide and individual sales programs which would penetrate the replacement and modernization markets.

The new some market naturally provides a basic volume of business which permits the mass production of heating and air conditioning equipment, Mueller pointed out. At the same time, the potential for expansion of this market alone does not seem to offer the extra volume required by the industry. As recognized, profit margins on new home installations are much too thin to enable generation of profits for progress by the manufacturer, wholesaler, or dealer.

"New home starts for the last several years have been in the area of 1,300,000 starts annually," said Mueller, speaking at a press conference during the recent Heating and Air Conditioning Exposition. "Suppose these starts suddenly spurted to an annual rate of 1,700,000, and let's assume that half of the additional 400,000 new homes would be equipped with brand-name central heating units.

"This would result in an increase of about 10,000 units for any one manufacturer — less than that for most — and these sales would provide little more than burden absorbing volume for the company and their customers," Mueller continued.

Modernization Market Would Improve Profits

"If we could develop replacement and modernization sales in the area of 300,000 to 500,000 units annually, while the new housing market pushes upward, we would see a very welcome change in the over-all profitability within our industry."

"It's been proved that the existing home market can be effectively penetrated with a concentrated sales and advertising program," Mueller declared.

"Most recently, we proved it with a program in Milwaukee to sell our electric humidifiers. Others, I'm sure, have proven it with individual programs elsewhere."

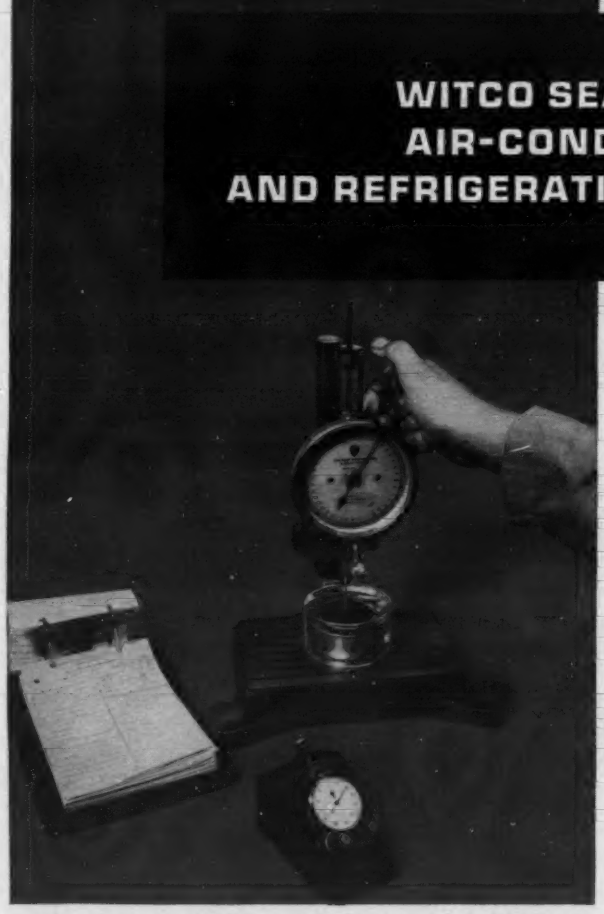
How To Develop Replacement Market

Mueller offered three principal elements for a successful program to break open the replacement market. One, the development of products providing consumer benefits which overshadow price—backed with programs to sell these benefits. Two, realization by the dealer that he will find his best profit possibilities in this market. Three, persuading the public to replace or upgrade their existing air conditioning systems.

"What is needed is the conviction of the entire industry—and everyone engaged in it—that this is a very real need and that this market must be hit with a concentrated industry-wide program." Mueller added, "Perhaps spotlighting the health and medical benefits of modern day heating and air conditioning systems is a worthy approach.

"Other industries which offer much less than ours have profited heavily by promoting these benefits to the public in vivid and effective ways," said Mueller. "The entire home comfort industry must move together—and should move now—if we are to be successful in this activity."

WITCO SEALERS FOR
AIR-CONDITIONING
AND REFRIGERATION APPLICATIONS



Careful testing of all Witco products means uniformity and high quality for you. Here, a lab technician checks a sealer with a penetrometer. This and many other tests check every characteristic that is vital to performance. Every sealer shipped must meet Witco's high standards and perform faultlessly for you.

Witco's sealers and vapor barriers are specially designed for air-conditioning and refrigerating applications. Good flexibility and excellent adhesion are exhibited over a wide temperature range (from below freezing to abnormally hot temperatures). Formulations to meet special application requirements are manufactured to customer order.

WITCO PRODUCTS ASSURE TOP QUALITY AND PERFORMANCE

Providing products especially suited to particular jobs is just one way Witco assures top performance. Take Witco's Plastic Sealer 320, for example. This material is an all-purpose sealer used where hard, dry films are required. It is stainless, tasteless, odorless and forms air-tight, positive seals.

Pioneer 14442 is a hot-applied sealer with odor level and moisture resistance that make it ideal for refrigerators, freezers, food-vending machines and water coolers. Pioneer 2205 also can be used in these applications. It is a high-melting-point sealer and retains high cold flow and flexibility at low freezing temperatures; it also assures good adhesion and excellent sealability.

The big reasons behind Witco Products' superiority are research and quality control. Every Witco Product is produced under the kind of strict laboratory quality control that assures uniformly high performance from shipment to shipment, year to year.

Witco's research laboratories and technicians not only develop new and improved products, but are available to help you with special problems. Write or call the nearest Witco sales office listed below for further information about these products and for information on sealers for other specialty applications.

SEE OUR CATALOG IN SWEET'S

WITCO CHEMICAL COMPANY, Inc.
PIONEER PRODUCTS DIVISION
Dept. 84-03, 122 East 42nd Street, New York 17, N. Y.
Sales Offices: New York • Chicago • Los Angeles • Toronto and Montreal, Canada

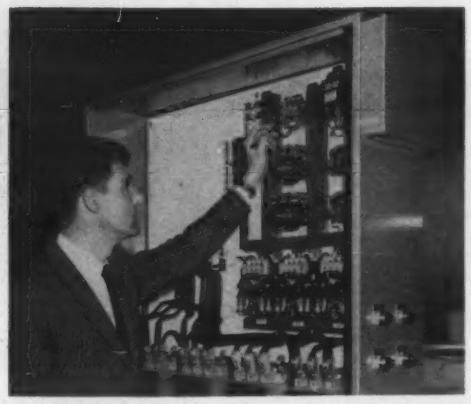
Here's a familiar sight!

These shoes belong to one of the many Lau Sales Engineers located throughout the United States and Canada. Manufacturers who use quality air handling components in their product have come to recognize these Lau Engineers as a symbol of knowledge and dependability...a reputation earned through 28 years of service to the industry. For constructive help on any air handling problem call or write Lau today. Your nearby Lau Sales Engineer will contact you immediately.

The Lau Blower Company · Dayton, Ohio

THROUGH integrated design, compressor (l.) becomes condensing unit (center), and liquid chiller (r.).

SHOP ASSEMBLY of hydronic specialties cuts installation cost and improves system, claims Bell & Gossett.



LEAD-LAG MECHANISM on Bell & Gossett dual unit chiller incorporates two independent condensing units and cooling circuits, serves to even out wear on the two compressors. Frank Ralfeissen, assistant chief engineer for Refrigeration & Air Conditioning Div., points to a relay in the pre-wired control panel which operates the lead-lag mechanism. Control knobs on right hand side are used in establishing sequence.

Bell & Gossett Integrates Design--

(Continued from Page 1, Col. 2)

condensers, evaporators, and controls.

The new line was featured at a special press preview held at the company's plant here during the recent 15th International Heating & Air-Conditioning Exposition.

Also in the spotlight were the previously announced line of gas engine driven condensing unit and chiller packages in the 25 to 150-ton range and the "Hydro-Flo package" plan intended to simplify installation of heating specialties for hydronic systems.

A big advantage of its integrated line, the company claims, is rapid delivery of a wide range of equipment. Units tailored to specific requirements can either be shipped directly from stock or the motor components can be readily assembled from stock items.

Reduction in component size and redesign of the frame have also removed approximately 500 lbs from every packaged cooler between 7½ and 150 tons, the company says.

With the integrated design, B & G matches one of five compressors to a motor also made by the company to its own specifications, which are mounted on a standard base. By adding legs, condenser, and piping the motor-compressor becomes a condensing unit. Further addition of evaporator controls to the same basic assembly converts it to a complete package liquid chiller. All components are manufactured by B & G and all components are matched. Each one of the assembled units is checked, operated, and tested under specified field conditions.

One B & G package chiller design is a dual unit incorporating two independent condensing units and cooling circuits. An automatic lead-lag selector switch alternates on every cycle the starting sequence of the motor-compressors to insure even wear on the machines.

In operation, No. 1 motor and compressor handles the load until cooling requirements are satisfied or until No. 2 unit needs to be called into use. On the next starting, No. 2 unit picks up the load. Therefore, each compressor gets equal usage. The capacity of the Dual unit may be reduced in stages down to 25%.

Demonstrating its recently announced "package plan" for hydronic systems, the company explains that it should not only simplify the contractor's job of estimating costs on a residential hydronic heating system but it should reduce installation costs materially, especially on housing project jobs.

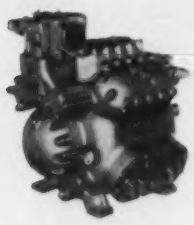
Such specialties as the booster pump, relief valve, compression tank, etc., as well as a complete bill of materials, and instructions are "packaged" by the manufacturer and wholesaler for pre-assembly in the contractor's shop rather than on the job. This is claimed to make for a better installation and a less expensive one.

EVERY B&G® COMPONENT IN THIS TYPICAL INSTALLATION IS ALIVE WITH STAR FEATURES

B&G CONDENSERS
Lighter, more compact units, featuring quiet, vibration-free operation, uniform gas distribution, cleanable tubes and higher operating efficiencies.

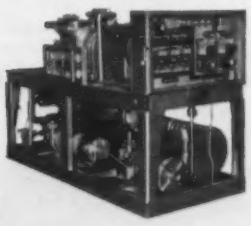
B&G EVAPORATORS
See illustration at right for features which give these units outstanding superiority.

B&G SUCTION LINE HEAT EXCHANGERS
Aid thermal expansion valve operation, prevent liquid slugging.

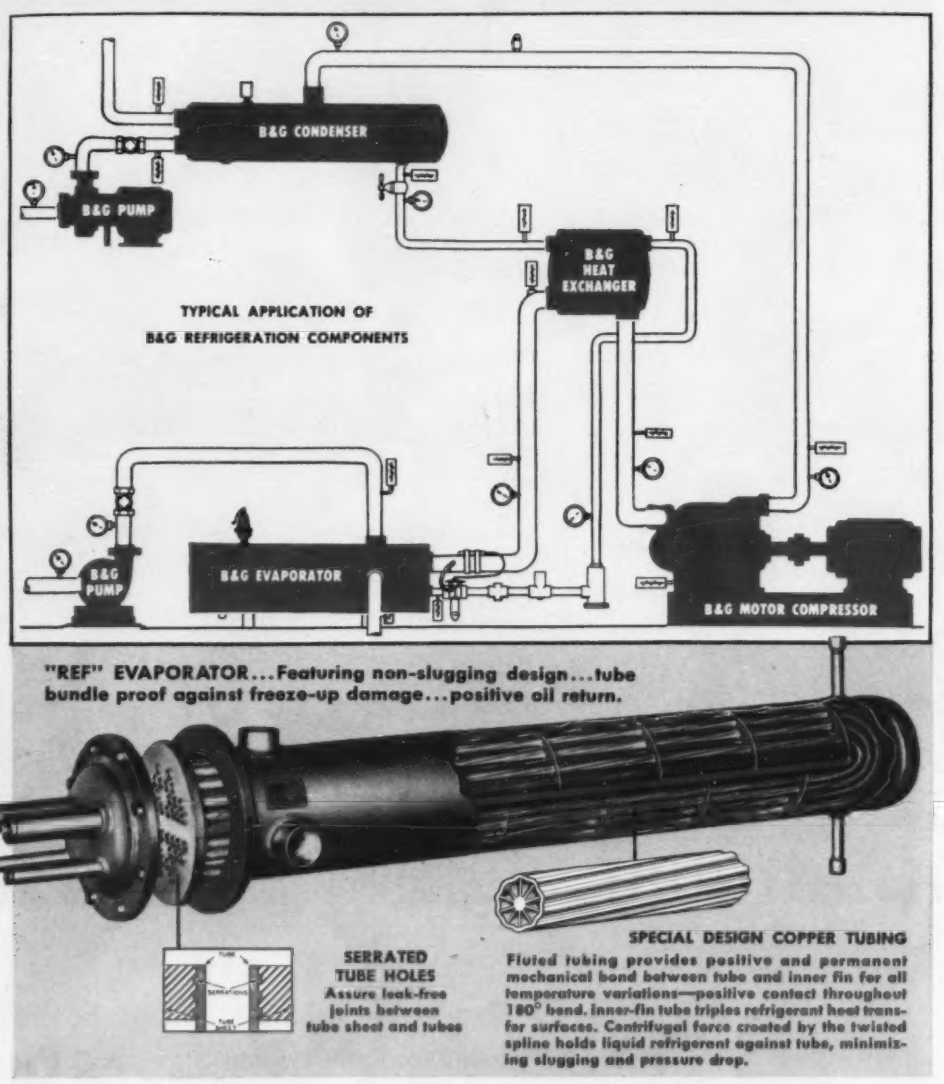


B&G COMPRESSORS
Precisely engineered for vibration-free operation with all the advantages of "open" units. All units have *one* bore—a few interchangeable parts service them all.

B&G CENTRIFUGAL PUMPS
A full range of *quiet* pumps for refrigeration and air conditioning systems.



B&G PACKAGE LIQUID COOLERS
A completely integrated and assembled water chiller—the only unit of its kind with all major parts designed, built and guaranteed by one manufacturer.



"REF" EVAPORATOR...Featuring non-slugging design...tube bundle proof against freeze-up damage...positive oil return.

SERRATED TUBE HOLES
Assure leak-free joints between tube sheet and tubes

SPECIAL DESIGN COPPER TUBING
Fluted tubing provides positive and permanent mechanical bond between tube and inner fin for all temperature variations—positive contact throughout 180° bend. Inner-fin tube triples refrigerant heat transfer surfaces. Centrifugal force created by the twisted spline holds liquid refrigerant against tube, minimizing slugging and pressure drop.

B&G makes a complete line of refrigeration and air conditioning components—*with many commonly used sizes available for immediate shipment from factory stock!*

These are quality units throughout! B&G Evaporators and Condensers all offer *plus values* in efficiency and rugged, long-life construction. They are manufactured by methods which hold shell diameters exact and free of distortion. This permits tight fitting baffles with minimum liquid slippage, greater efficiency and easy replacement of tube bundles if ever necessary.

All units are built to A.S.M.E. Code requirements and are so stamped.

When selecting pumps, B&G Series 1522, 1531 and 1510-B Centrifugal Pumps invite your most critical comparison. They are of vertical split case design, equipped with the exclusive, leak-proof "Remite®" Mechanical Seal and noted for quiet, dependable operation.

BELL & GOSSETT
COMPANY
Dept. GO-47, Morton Grove, Illinois

Canadian Licensee: S. A. Armstrong, Ltd., 1400 O'Connor Drive, Toronto 16, Ontario

Friedrich Corrects Specifications Data

SAN ANTONIO — Friedrich Refrigerators, Inc. telephoned the following corrections to its split system specifications appearing on page 26.

Condensing unit model DRAU-753 should be labedel ADRAU-753. Capacity rating on condensing unit model DRAU-1003 is 102,000, rather than 111,000 Btu. Capacity ratings on evaporator models ACEF-751 and RF 751 should be 84,000 rather than 81,000 Btu.

Kilowatt input totals for condensing units should read:

DRAU-201, 2.51; ADRAU-301, 4.18; ADRAU-401,3, 5.55; ADRAU-501,3, 7.38; ADRAU-753, 9.54; DRAU-1003, 11.25; and DRAU-1503, 16.75.

FIRST line of welded hermetics to offer

INTERNAL INHERENT ACROSS-THE-LINE MOTOR PROTECTION

4U Copelaweld®

WELDED HERMETIC MOTOR-COMPRESSORS

Single phase and three phase

The 4U Copelaweld is the first welded motor-compressor in the industry to offer internal, inherent across-the-line motor protection. It is hermetically sealed inside the shell! It cannot be tampered with, by-passed or changed. No pilot circuits are required . . . no external current or temperature-sensitive devices are needed.

Close proximity of the protector to the motor provides superior locked-rotor and running protection and is independent of external ambient conditions.

QUIET, VIBRATION-FREE OPERATION . . . assured by Copelaweld's low-speed, four-cylinder design, cast-in discharge muffler, and internal spring mountings.

LASTING DEPENDABILITY . . . made possible by use of light-weight reciprocating parts, positive lubrication system, and other proven Copeland design features.

4 cylinders • 1750 R.P.M.
2½ H.P. • 3 H.P. • 3½ H.P.
4 H.P. • . . . and now 5 H.P.

Whether you're concerned with improving today's air conditioners and heat pumps or creating new designs for the future, you should know what the 4U Copelaweld has to offer. Request Bulletin No. 6026.

Welded Hermetics, Accessible Hermetics or Belt-Driven . . . *COPELAND has what it takes!*

SINCE 1918 Copeland REFRIGERATION CORPORATION, Sidney, Ohio

Distributor Diversification (2)

Spread Your Costs—But Don't Forget Distributor's Responsibility To Do Job for Manufacturer

FACED WITH the ever-mounting cost of skilled labor, it is just good business for the distributor to apply that labor where it brings the best return and to keep it busy the year around.

That means diversification, James A. Scatena of Scatena-York Co. told fellow distributors at the NCRSA convention in New Orleans.

Best results are obtained through specialty type selling, definitely departmentalized, he declared in last week's instalment. He told how sales are handled in the ice machine department. Here he tells how he sells engineered machinery and air conditioning, and spells out the diversified distributor's responsibility to his manufacturer.

* * *

How He Sells Engineered Machinery

"In the engineered machinery sales division, certain jobs are sold directly through creative sales and through referrals. But a large percentage of the jobs come along on a bid basis through a prime contractor.

"Here again the department must be set up to cover both classes of business adequately by giving engineering service and by also doing a good selling job.

"We believe, however, that you cannot cut too fine a line between departments. There must be flexibility and there must be an overlapping if required in order to run the firm efficiently.

"In our company we find it impractical for our engineered machinery man, who has just sold a large cold storage room plant to a customer, to turn around and tell that customer that he will send 'Jones' around to see him regarding the room air conditioner that is required for the general office.

"When our food market salesman learns that the store needs air conditioning, we believe that he should also sell the packaged air conditioners that are required for the market which he has already sold.

"We do not believe that it is practical, or economical, to send out our air conditioning specialist to take over just for the sale of several packaged commercial air conditioners.

"The engineered machinery division simply assists in the equipment selection by providing any required engineering.

How Cooling Sale Tied-In

"For example, in a recent supermarket sale handled by one of our sales engineers, after his sale of about $60,000 of market equipment was completed, the owner decided to air condition the market.

"The sale up to that point carried a markup of about 1.25. If we were not selling air conditioning, it would end there.

"But since we do have air conditioning products, an additional sale of $6,000 for about 20 tons of air conditioning with four ceiling mounted packaged air conditioners was effected. This part of the sale carried a 1.50 markup, which means that we actually had a sales equivalent of about $70,000 by reason of the additional markup.

"Now, it took about 50 man hours to install $6,000 worth of air conditioning. It took 750 man hours to install $60,000 worth of market equipment.

"In other words, it took about 15 times as many man hours to install a sale with a 1.25 markup, but the sale was only 10 times the volume of the one that carried a $1.50 markup.

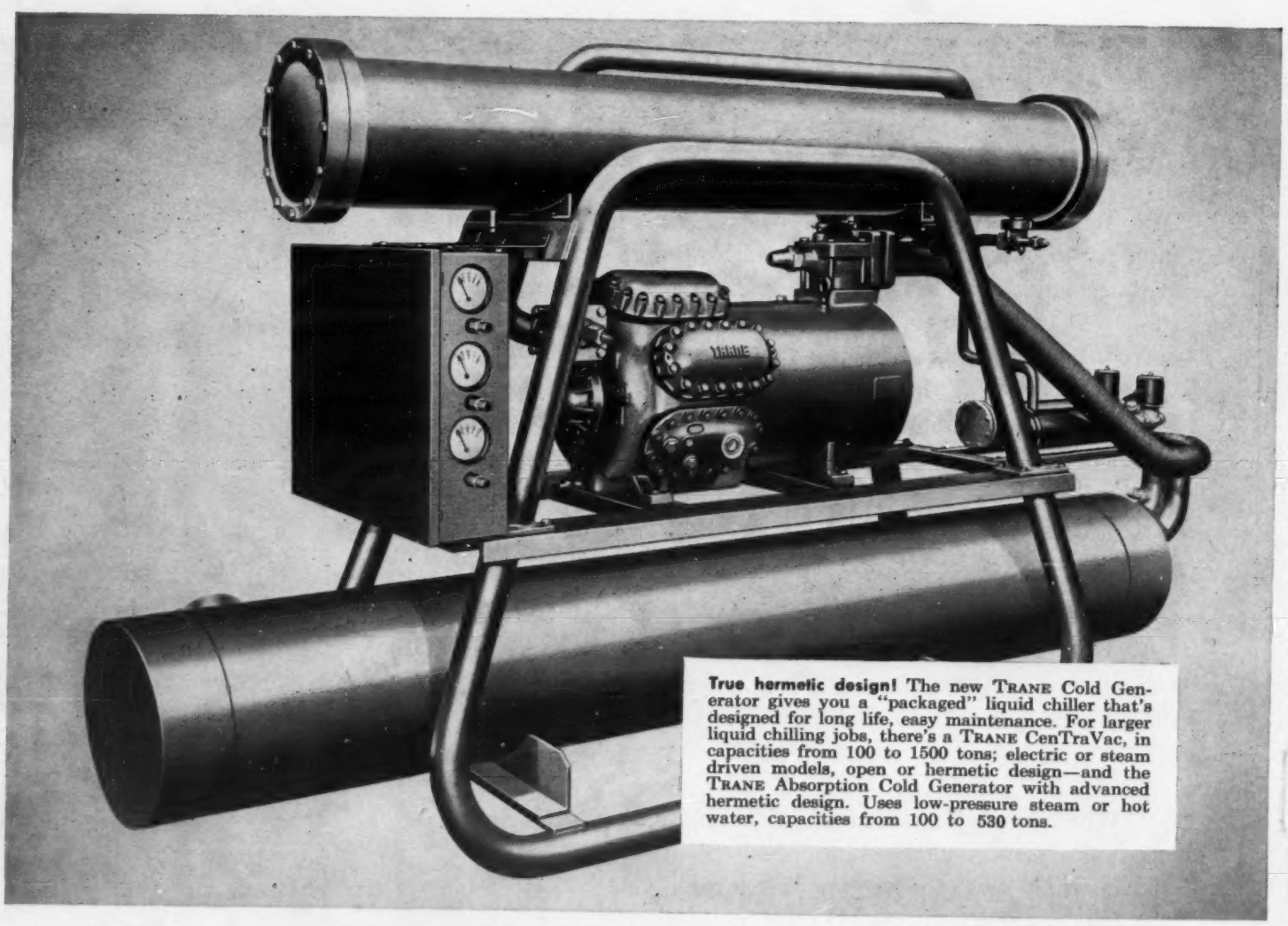
"These figures are more significant when you realize that the same salesman can do the job. If our engineered machinery salesman, who knows very little about volume sales on ice machines as concerns bars and restaurants, finds that the wholesale meat company he has just sold a cold storage room installation to needs a 1-ton Flakice machine for his sausage kitchen, we believe he should sell it.

"In other words, whereas we feel and know that volume sales on this non-food market equipment will be achieved only through specialized divisions in your company, we do know that many sales would be lost if we did not permit some overlapping.

"If this is not done, the distributor will lose money and the manufacturer will end up looking for a new distributor.

"Therefore, with specialized activity in the various departments, the distributor must survey his market and consolidate his sales activity so that his overhead costs will be proportionate to the anticipated results.

For faster installation, make it a new Trane



True hermetic design! The new TRANE Cold Generator gives you a "packaged" liquid chiller that's designed for long life, easy maintenance. For larger liquid chilling jobs, there's a TRANE CenTraVac, in capacities from 100 to 1500 tons; electric or steam driven models, open or hermetic design—and the TRANE Absorption Cold Generator with advanced hermetic design. Uses low-pressure steam or hot water, capacities from 100 to 530 tons.

Now! A hermetic model of the Trane Reciprocating Compressor!

Here's a new, efficient Reciprocating Compressor that's *fully hermetic*, designed for the more rigorous demands of R-22. This unit is of single-housing construction. Motor and compressor are in one shell, with a bolted end cover for easy access. This minimizes alignment problems experienced with other hermetic compressors that have 2-part housing.

The new TRANE Hermetic Reciprocating Compressor has multi-step capacity control that saves power by reducing starting, stopping. And the truly hermetic design eliminates crankshaft seal and coupling to provide quiet operation, simplified installation, longer life.

Check these advanced TRANE features:

- **Designed for R-22 and R-12** (not a converted R-12 machine).
- **Single-housing construction** for simplified installation, trouble-free operation, easy access for maintenance.
- **Multi-step capacity control** reduces starting, stopping, saves power.
- **Exclusive internal thermal protector,** located in the motor windings, protects against any condition that causes high motor temperatures.
- **Large suction chamber** and cylinder head safety springs provide protection against refrigerant slugging.
- **Available** in sizes from 10 to 150 tons.

"I submit that there is no set pattern on exactly how to go about getting this non-food-market type of business profitably. But we have learned that you cannot just dream by turning your sales force loose on everything and expect results. It must be departmentalized with reasonable overlapping and each salesman must know his business.

Your Responsibility To Manufacturer

"Now, how about your responsibility to the manufacturer whose products you handle? We must never lose sight of the small print at the end of each franchise which reads something like this, 'Cancellable with or without cause upon due written notice.'

"I must humbly state that this is one of Scatena York Co.'s greatest concerns. It should remain the concern of any contractor-distributor who holds franchises on other than non-food-market type of refrigeration equipment.

"For you may make a good profit and run a good company, but that does not mean much to the manufacturer if his product is not getting adequate volume distribution.

"There are many factors to be considered that concern the manufacturer whose franchise you hold. You must consider the physical factor and your place of business must be large enough to warehouse certain types of equipment.

"It must be adequate to accommodate sales personnel in a proper atmosphere. You cannot do engineered machinery sales volume without heavy equipment with which to install and service it, for example.

"It is usually not possible to do a sales job in ice service equipment without an adequate stock of ice machines. When a customer orders, he wants delivery and he wants it *now*.

To Buy Or Not To Buy Air Conditioning

"And, on air conditioning? Here is a real 'dilly.' Here is a guessing game to end all guessing games. If you do not have adequate stock when the heat wave hits, you may as well go out fishing. If you order too much and the heat wave does not hit . . . you may have no choice but to go fishing.

"You have to be a weather forecaster deluxe. You have to be conscious of your local and state property tax assessments and arrange to have all carloads of equipment moving over the state line after midnight of tax date. You plain have to be a good guesser.

"In any event, you need space to accommodate stock. Your responsibility to your manufacturer consists of doing a good volume with adequate stock, good sales representation, and a timed advertising program.

"A good distributor manufacturer relationship exists when you plan your sales program, date your orders to the factory, thereby enabling the manufacturer to schedule his production, coordinate your local advertising with the national advertising, and then cover your prospects adequately with trained sales personnel.

"I might add that this combination might result in your getting an increased sales quota from your manufacturer for the following year, but it pays off.

"So, diversified selling has its advantages, but it has its headaches if you spread yourself so thin that your franchise may be placed in jeopardy.

"When you understand *why* it is important to your organization to sell a non-food type of customer, and you know *how* to do it with complete awareness that your factory has to be concerned, here is what will happen in your organization . . .

What Diversification Means To Distributor

"**Point No. 1** . . . there is something going on all the time. The $25,000 and $50,000 sales are very important, but when you hit a trough for a few days or a week, morale is lifted if you toss in a few ice machine sales or air conditioning sales, or what have you. The morale of the sales department and the central office goes up, but very important is . . .

"**Point No. 2** . . . which again involves that expensive commodity known as skilled labor. If you have these in-between sales you have less turnover in your service and erection department, and you can generally plan to keep the force busy the year round. Since variety is still the spice of life, you keep your service and erection department out of a rut by bringing them into contact with different types of refrigeration equipment.

"**Point No. 3** . . . you spread your financing to more fields, thereby cutting your over-all risk. Our experience has been that risk in financing is minimized on a diversified program.

"**Point No. 4** . . . we believe that refrigeration is refrigeration. Every ice machine contains a refrigeration cycle. So does an air conditioner. We should extend ourselves beyond the food-market customer as far as we can economically do so.

"Why sacrifice our know-how in these fields by specializing in food market sales alone?

"After over 20 years with this belief, we are prepared to embark on 20 more because we think this policy has given our company a sound foundation and a profitable return."

trouble-free operation, Hermetic Cold Generator

Here's a "packaged" liquid chiller of advanced design for a wide variety of process or comfort applications

When you plan your next refrigeration job—for comfort or process cooling—look at this new TRANE Reciprocating Cold Generator. It's *hermetic*, to provide you with a vastly improved machine for a wide variety of applications. It features an all-new TRANE Hermetic Compressor (illustrated and described below); a new chiller; a new condenser with a built-in sub-cooler that eliminates the need for a heat exchanger in built-up systems. All of these major components are arranged to provide an amazingly compact and efficient machine; and all three are engineered and built by TRANE. They are designed and built together to work together.

The new TRANE Reciprocating Cold Generators are designed for either R-22 or R-12—except the 10-ton model that uses R-12 only. Exceptionally compact and lightweight, the units will pass easily through a standard 36"-wide door. Available with pneumatic or electric controls, they are preassembled, prewired. There is no on-the-job wiring except for lead-in. The advanced design assures maximum efficiency on a tons-per-hp basis. They operate quietly, efficiently . . . are easy to maintain.

Want more facts? For complete information and specifications on the new TRANE Hermetic Cold Generator—and the complete line of TRANE Water Chillers from 10 to 1500 tons, contact your nearby TRANE Sales Office; or write TRANE, La Crosse, Wisconsin.

Check these advanced TRANE features:

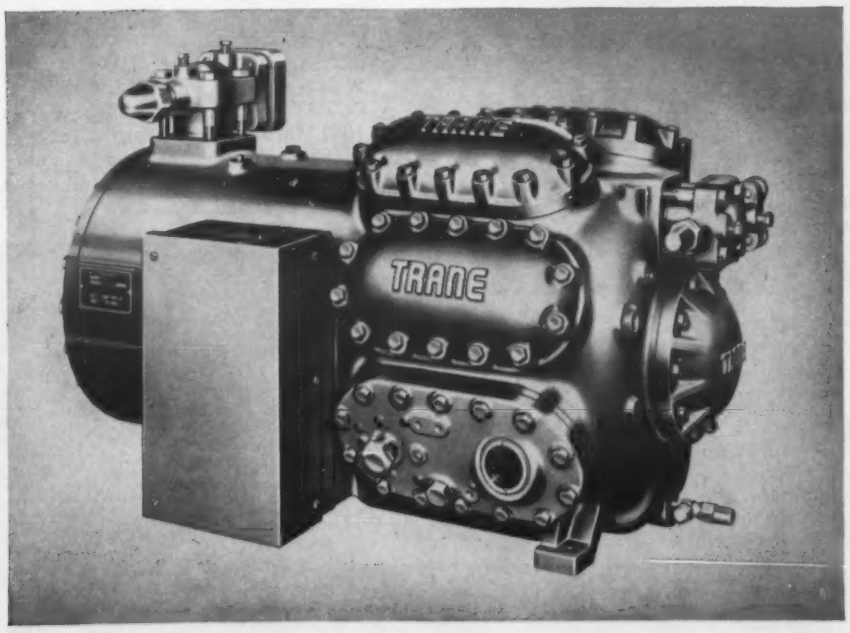
- **All major components,** chiller, condenser, compressor, designed and built by TRANE.
- **Advanced hermetic design** assures maximum efficiency, simplified maintenance and installation.
- **Compact size;** small enough to pass through a standard 36"-wide commercial door.
- **Packaged design;** factory-wired and assembled to cut on-the-job labor. Pneumatic or electric control panel mounted and prewired.
- **Versatile.** May be used for any process or comfort liquid cooling application . . . to maintain constant temperature for electro-plating baths and other critical operations. Units available for use with evaporative or air-cooled condensers.

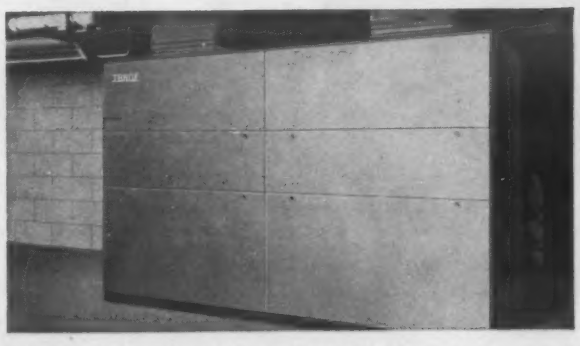
For any air condition, turn to

TRANE

MANUFACTURING ENGINEERS OF AIR CONDITIONING, HEATING, VENTILATING AND HEAT TRANSFER EQUIPMENT

THE TRANE COMPANY, LA CROSSE, WIS. • SCRANTON MFG. DIV., SCRANTON, PA. CLARKSVILLE MFG. DIV., CLARKSVILLE, TENN. • TRANE COMPANY OF CANADA, LIMITED, TORONTO
100 U.S. AND 19 CANADIAN OFFICES





Trane Commercial Self-Contained Air Conditioners feature the new TRANE Hermetic Compressor. Quiet and compact, these units provide maximum cooling comfort for commercial and industrial applications. Feature new TRANE Sigma-Flo Fin Coils for greater efficiency in less space. Air or water-cooled models in sizes from 10 to 50 tons.

Sales By Equipment Distributors Up 10%

WASHINGTON, D. C.—Sales of air conditioning and commercial refrigeration equipment distributors last year were 10% ahead of 1959 despite a decline in December of 18% from a year earlier and of 9% from a month earlier, according to the Census Bureau.

The distributors' inventories at the end of December were 6% higher than at the end of 1959 and down 5% from November.

Sales last year of plumbing and heating equipment and supplies distributors dropped 2% compared with 1959. Their December sales were off 6% from December, 1959, and down 17% from November. Their end-of-December inventories were unchanged from a year earlier and 5% less than a month earlier.

N. J. OK's Gas, Electric Rate Adjustments

NEWARK, N. J.—The State Public Utilities Commission has approved several Public Service Electric & Gas Co. rate changes including new rates for residential electric heating and for summer gas air conditioning in commercial and industrial establishments.

The new electric heating rate is available where electricity is used as the principal source of heating the home. It provides 25% savings to customers compared with the previous rate for electric home heating, according to the company. The rate does not apply to portable or auxiliary electric heating.

Public Service also modified its gas rate schedule to provide a lower rate for summer gas air conditioning in commercial and industrial establishments. Summer gas air conditioning is relatively new in this area although popular in the southern and western parts of the country.

Also introduced were a new rate for gas service which may be interrupted by the company during peak use period and changes in electric power rates for very large users. Substantial savings are provided in each case over regular rates.

Satisfied User Display

BELIEVING THAT satisfied customers are the heating and air conditioning man's most valuable assets, Wolff, Kubly and Hirsig of Madison, Wis. periodically photographs the homes which have Mueller Climatrol products providing climate control. This attractive display, located in the firm's window, is on a heavily travelled street.

H. H. Baxter Retires

CLEVELAND — After 34 years of service with Iron Fireman Mfg. Co., H. H. Baxter has retired, the company announced.

Baxter joined the company in Portland, Ore., in 1927.

RACCA, UA Local Agree on 'Armaflex' Installation Terms

LOS ANGELES—Four basic points regarding the application of "Armaflex" insulation on pipe were agreed upon at a recent meeting of representatives of the asbestos workers local union, insulation contractors, Refrigeration Fitters Branch of UA Local 250, and the Refrigeration & Air Conditioning Contractors Association of Southern California.

The meeting was arranged after John Suitor of the asbestos workers union contacted a member of RACCA of Southern California concerning this matter, the latter group reported. According to the report, agreement was reached on these basic points:

"1. Minor applications of Armaflex by refrigeration fitters incidental to their work would be disregarded, the definition of the term 'minor' to be determined at later meetings between the parties.

"2. Refrigeration and air conditioning contractors were entitled, if they so desired, to employ men from the asbestos union, provided they sign a labor agreement with the asbestos workers union.

"3. The fundamental basis for sub-letting work to insulation contractors, as with all subcontractors, is the better service and efficiency that the insulation contractors can give.

"4. That talks would be instituted between the contractors of the two associations, looking toward joint cooperation since the insulation contractors are a part of the refrigeration and air conditioning industry."

Bryant Sets Up 3 New Branches

INDIANAPOLIS — Bryant Mfg. Co. has established branch operations in Albany, N. Y., Baltimore, Md., and Pittsburgh, it was announced by David W. Hoppock, general sales manager.

Named to manage the Pittsburgh branch was Albion W. Frazier, a member of the Bryant organization since 1952. The new facility will serve the greater Pittsburgh area as well as counties within 125 miles.

The Albany branch will serve the northeastern New York state marketing area. The former distributor, Westover-Wolfe Service Inc., of 21 Plaza St., Albany, was established in 1951 to handle Bryant's products in these markets. The newly-formed branch has moved to 45 Learned St.

Named to manage the Albany branch is Richard E. Johnson, who transferred from the firm's Cambridge branch office.

The Baltimore branch will serve that marketing area. Formerly, Bryant Gas Equipment, Inc., which was established in 1945, distributed Bryant products in Maryland. The newly-formed branch will continue at the same location, 527 W. 29th St.

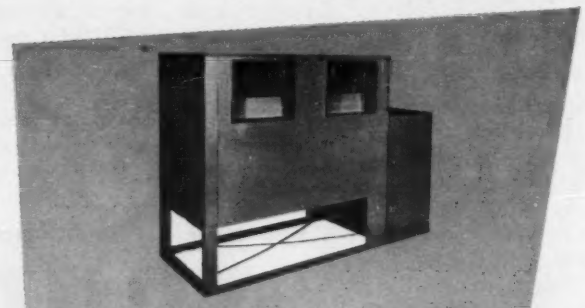
Robert J. Fairhead, who has been with Bryant's regional sales staff, has been appointed Baltimore branch manager.

a brand new
PROFIT MAKING LINE
of Commercial air-cooled
split systems FOR YOU!

Air Conditioners
MODELS FROM 7½ TO 20 HP. MULTIPLES FOR HIGHER RATINGS

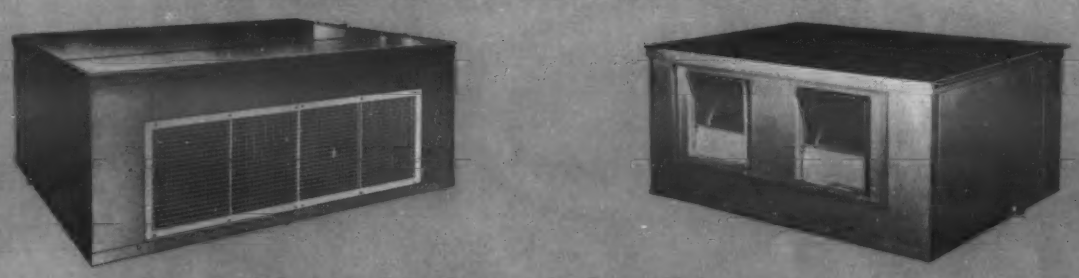
CONDENSING UNIT
Rugged • Quiet • Weatherproofed • Diagonal coil for minimum plan area • Controls wired and enclosed • Compressor section may be detached • Designed for outdoors.

Heat Pumps
MODELS FROM 7½ TO 20 HP. MULTIPLES FOR HIGHER RATINGS



CONDENSING UNIT
High cfm., low sound level, Blower type fans • High capacity coil • Greater flexibility in equipment location • Supplimentary heaters if required.

Horizontal Air Handlers



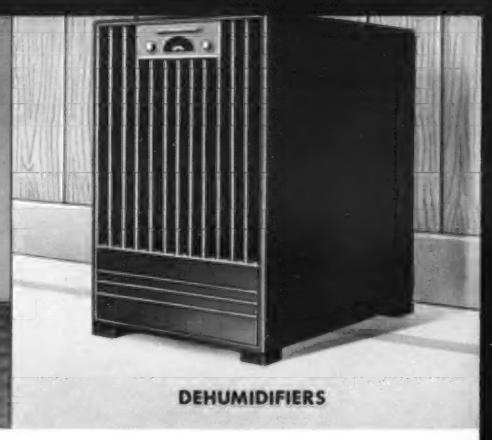
Sizes to match Condensing Units • For remote installation with ducts or with plenum and 4-way grille as optional extra • Large coil face area for low air velocity and low sound level.

12 YEARS AND OVER A MILLION UNITS
of air conditioning and refrigeration systems have provided the experience behind this Commercial Line. Since 1949 our facilities have expanded each year to where we now have more than 230,000 square feet of manufacturing area. Addison's know how, experience and fully equipped plants are your assurance of quality products.

ADDISON PRODUCTS COMPANY
ADDISON, MICHIGAN · PHONE LINCOLN 7-1200

BIG FAMILY OF SIZES. Bendix-Westinghouse compressors and condensing units come in a wide variety of sizes and capacities—ranging from ⅛ hp all the way up to 4 hp. So, no matter what the needs of your refrigeration or air conditioning equipment, you'll find one of our units will fill the bill exactly. You'll also find it delivers greater efficiency in less space and at lower cost. To find out more, turn the page.

Bendix-Westinghouse MOTOR COMPRESSORS



BENDIX-WESTINGHOUSE COMPRESSOR LINE COVERS EVERY RESIDENTIAL AIR CONDITIONING NEED

MOTOR COMPRESSORS FOR RESIDENTIAL AIR CONDITIONING

Model	HP	Capacity*
DEHUMIDIFIERS		
CH 20 V-1	1/5	1,800
YCH 25 V-1	1/4	3,400
ROOM UNITS		
YCH 137 VA-1	3/4	6,100
YCH 161 VA-1	1	7,050
YCH 176 VA-1	1	8,500
YCH 213 VA-1	1	10,000
YCH 213 VA-2	1	10,000
YCH 232 VA-1	1	11,000
YCH 250 VA-2	1	12,000
CH 286 TA-2	1	12,800
YCH 310 VA-2	1½	14,500
CH 325 TA-2	1½	14,400
CH 350 TA-2	1½	15,300
CH 383 TA-2	1½	17,800
CH 400 TA-2	2	18,400
CH 420 TA-2	2	19,500
CH 455 TA-2	2	21,600
CH 490 TA-2	2	24,400
CENTRAL SYSTEMS		
CH 490 TA-2**	2	24,400
YCH 700 TA-2**	2½	30,500
YCH 830 TA-2**	3	36,500
YH 932 TA-2	3½	42,200
YH 1020 TA-2	4	47,500

Y in the model number denotes 2-pole; all others are 4-pole

*Based on: 45°F. Evaporator temperature
130°F. Condensing temperature
95°F. Return gas temperature entering compressor
15°F. Liquid subcooling
95°F. Ambient

**Available PSC/CSR. All central system compressors available single or three phase

Here—in the modern Bendix-Westinghouse 1/5 to 4 h.p. compressor line—residential air conditioning manufacturers are finding the best answers to their compressor needs for room units, central systems, and dehumidifiers.

Featured are such outstanding *built-in* values as: unusually quiet operation for maximum user satisfaction . . . overload protection for most efficient performance in all operating ranges . . . latest-type motor insulation for maximum safety . . . and full suction gas cooling and positive pressure lubrication for utmost dependability.

Other *plus* advantages that are yours with Bendix-Westinghouse include: reduced size that takes less installation space, lighter weight that cuts shipping expense, and lower price that reduces production costs.

No other compressor line offers you so many *extra* values. Ask for prices and detailed specifications.

Bendix-Westinghouse

EVANSVILLE, INDIANA

A Division of Bendix-Westinghouse Automotive Air Brake Company, Elyria, Ohio

Export Sales: Bendix International, 205 E. 42nd St., New York 17, N. Y.; Peter A. Karl, Inc., Union Station Bldg., Utica 2, N. Y.; Sabal-Kielmann, Inc., 15 William St., New York 5, N. Y.

THE 5-YEAR WARRANTY:

A Progress Report

By Frank J. Versagi

Special Report by the NEWS

Confused.

That is the only word which accurately describes the position of the 5-year warranty today. It is almost impossible, for example, to make any one statement about the subject to which there are not a multitude of exceptions.

The majority of manufacturers are all but pleading for "someone" to bring order from the chaos, but no quick answer seems imminent. Industry leaders are not leading; for that matter, followers are not following. Everyone is going off in a different direction, depending on his philosophy and his experience.

There is a discernible trend toward lessening warranty coverage, but here too there are exceptions.

The nearest thing to a full 5-year guarantee we have been able to find is offered by Green Colonial, Inc., Des Moines, Iowa. "Exclusive of external controls, the complete refrigeration cycle and its components" are covered under Green Colonial's guarantee.

"Any needed compressor replacements during this period will be made at the factory on a no charge basis, with Green Colonial paying transportation charges both ways. . . . (The company) shall not be liable for the loss of refrigerant beyond the first full year of use . . . purchaser assumes responsibility for any dealer labor charges that might be involved in the replacement of parts after the first full year's use."

The most popular form of warranty is that termed "one-and-four." Seventy-six per cent of the companies which cooperated in this survey use the 1&4 in some form.

Originally, this type of warranty covered electrical components and miscellaneous vendor-supplied items for one year only, then covered the refrigeration cycle for another four years.

Refrigeration cycle, in the beginning, meant the entire sealed system—condenser, evaporator if unit was self-contained, expansion valves — in fact, "any part of the system which 'sees' the refrigerant," one manufacturer put it.

Less than 10% of the responding manufacturers still cover the entire refrigerant circuit with their extended-four. Most warranties protect the entire unit for the first year, the compressor only for the extended-four. Many producers have changed to this lesser protection in the last year; a few made the change effective Jan. 1, 1961.

A significant minority, 22%, of manufacturer are offering only a one-year warranty.

Of these a very few offer the extended-four as optional, but the customer must pay for the added protection. Only two companies mention use of warranty insurance, although many manufacturers do, in effect, cover themselves with one type of insured protection or another.

At the other extreme from Green Colonial's full 5-year guarantee is the one-year coverage given by North Coast Mfg. Corp., Portland, Ore. "Our motor-compressor is covered by a one-year warranty. All components and workmanship are guaranteed against defect for a period of 90 days."

Probably the most rapid and significant changes have had to do with labor allowances and freight allowances. They are being dropped. Here again there is confusion, though:

When one company says it allows labor, it means during the extended-four, not during the first year; another company will allow labor during the first year but not during the extended-four; still another will allow labor for the entire 1&4.

Similarly, when a manufacturer states that he has no labor allowance, questioning may reveal he means the first year, the extended-four, or the entire warranty period.

Where labor allowance is made, dealers and contractors complain that they are not high enough; manufacturers rebut that such allowances are intended "for direct labor only."

So it is with freight allowances. A very few companies allow freight both ways for in-warranty replacements. Most expect the defective parts to be sent them prepaid; they in turn will ship the replacement prepaid. And some refuse to pay any transportation costs at all.

The tabulations which follow are based on information submitted to the NEWS by responding manufacturers. Especially when considering the affirmative and negative listings for labor and freight allowances, the reader should keep in mind the variables cited in the preceding paragraphs. If a company said *yes* or *no*, it was listed but any attempt to qualify and classify the replies would have led to unwieldly confusion. (Full company names will be found in the specifications section.)

(Continued on Page 13)

This article offers a descriptive report on the status of the 5-year warranty. No attempt is made here to judge the desireability of extended warranty.

Feelings on the matter are strong, however, and the companion article beginning on page 12 presents these conflicting opinions.

WATER COOLER
10 GALLON PRESSURE TYPE

*$139.50
*To Dealers Only

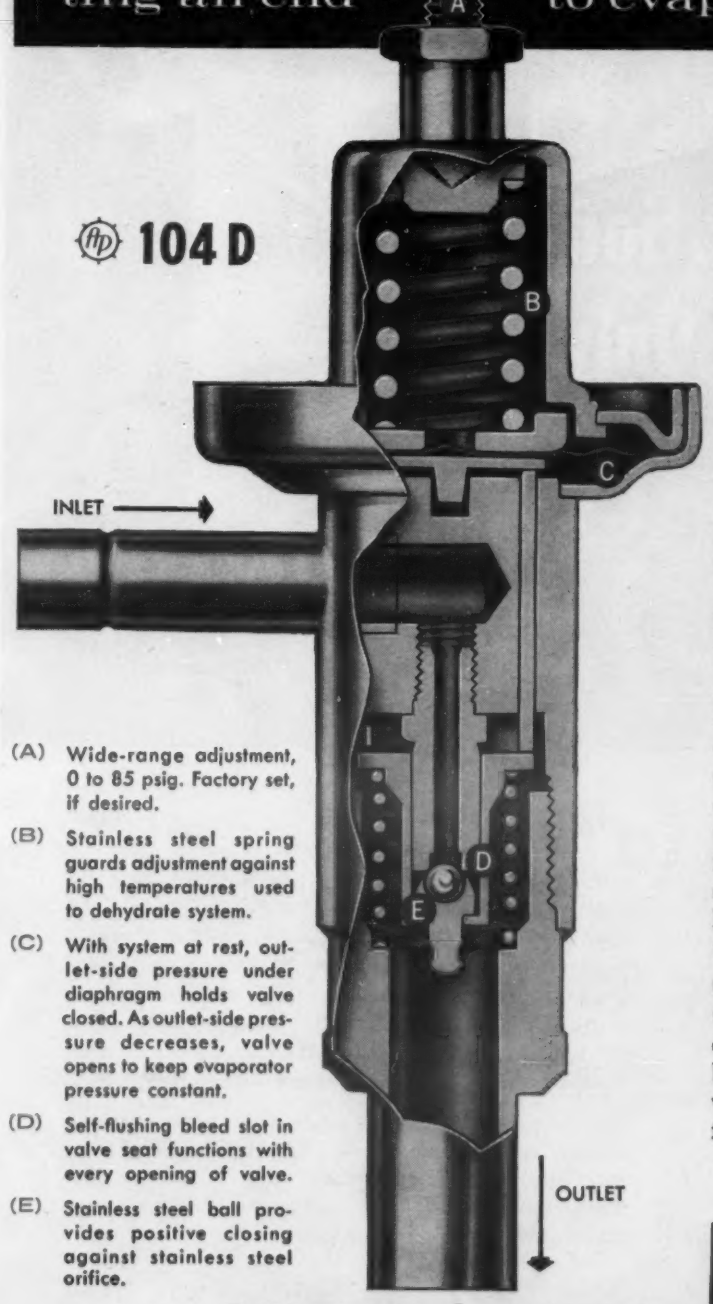
Attractive • Sturdy • Economical • Stainless Steel Drain Top • Nickel Finished Copper Cooling Tank • ⅓ h.p. Tecumseh Hermetic Unit • Pre-Cooler • 5-Year Warranty on Refrigeration Cycle • Conforms to Government Specifications •

Remcor Products Co.
321 East Grand Avenue, Chicago 11, Illinois
manufacturers of water coolers since 1940

REMCOR
Model CW10A

Also 5 gallon Bottle Water Cooler—*$89.50

In room air conditioners and water coolers made by Carrier, Emerson, Fedders, Halsey Taylor, Westinghouse, Whirlpool and York . . . this new constant pressure valve protects their performance by putting an end to evaporator freeze-ups



104 D

(A) Wide-range adjustment, 0 to 85 psig. Factory set, if desired.

(B) Stainless steel spring guards adjustment against high temperatures used to dehydrate system.

(C) With system at rest, outlet-side pressure under diaphragm holds valve closed. As outlet-side pressure decreases, valve opens to keep evaporator pressure constant.

(D) Self-flushing bleed slot in valve seat functions with every opening of valve.

(E) Stainless steel ball provides positive closing against stainless steel orifice.

AND IT'S HERMETICALLY SEALED FOR FAST, EASY INSTALLATION

Here's a proven design for volume production — ready to go, nothing to assemble. And that's just the start of it, for this constant pressure valve eliminates evaporator freeze-ups regardless of load.

Triggers instant cooling action. The 104D stays closed during the off cycle . . . opens as required to keep evaporator pressure constant. With the valve bleeding off the high side pressure during off periods (within the two-minute UL specification), there's no chance for starting overloads, even with low-torque motors.

Ideal for other uses. The performance-protecting values offered by this new valve are not confined to room air conditioners and water coolers. With cost tuned to the needs of volume production, the 104D is ideally suited for use in cold beverage and food dispensers, ice cream cabinets, bottle and milk coolers, dehumidifiers. Whatever the installation, you can be sure of dependability that virtually eliminates service problems.

Controls Company of America is uniquely equipped to help you solve your control problems. A note from you will bring complete details about the AP valve (104D) featured here. Or ask for facts about other control opportunities.

Creative controls for industry

CONTROLS COMPANY OF AMERICA
HEATING AND AIR CONDITIONING DIVISION

HAC-14-60R

2460 N. 32nd Street, Milwaukee 10, Wis. • COOKSVILLE, Ontario • ZUG, Switzerland

THE 5-YEAR WARRANTY:

Is It Really a Monster?

By Frank J. Versagi

Special Report by the NEWS

Is the 5-year warranty really bad for the industry?

To some, even asking the question is heresy and treason. Judging by first impression, one would think that the air conditioning industry is unanimous in its condemnation of extended warranties.

Yet, this is not entirely so. There is a strong minority holding out for an extended warranty. And, even among those who profess that such coverage is uneconomical and unfair to the manufacturers, there is recognition of the fact that the industry owes the customer something more than nominal protection for his investment. For these, the argument is over means, not ends.

"By eliminating extended coverage of the entire refrigerant cycle, we are placing the responsibility where it belongs —on the installing dealer entirely. We do not intend to shirk our responsibility on the equipment in any way; we stand behind it 100%.

"On the other hand, we are not going to continue to pay for the goofs that are made by some installer who will not even take time to read our installation instructions," says one major manufacturer.

Others who feel like this have moved or are moving toward a one-year warranty with no extension on either cycle or compressor.

"Let the customer buy his protection after the first year," suggests another manufacturer.

Some are concerned over what seems a disregard for the consumer. Richard M. Herbert, chief engineer of Heil-Quaker Corp., Nashville, Tenn., says, "We realize that a number of air conditioning manufacturers have reduced their warranties to one year.

"From the manufacturer's standpoint this might be desirable as it will undoubtedly result in less expense to them. The reduced warranty is also being actively endorsed by contractors, very logically, as it relieves them of book work and perhaps restrictions as to charges.

"We feel at this time, however, that every effort must be made to further this industry and that customer goodwill is essential to its success and growth," Herbert feels. Therefore, Heil-Quaker plans to continue use of the 1&4 warranty. (The four-year extension is handled by Marsh and McLennan Insurance Brokerage firm, Chicago.)

"In the past," the chief engineer continues, "criticism could fairly be made of manufacturing and design methods and practices which were not conducive to long life for an expensive product such as air conditioning. Happily, we believe this is gradually being improved and, if coupled to a field maintenance program of high quality, we will be able at that time to reduce the warranty periods."

That sales can be built and a reputation can be maintained without the 5-year warranty is the experience of Bell & Gossett. "The 5-year warranty was devised and put into practice by manufacturers of hermetic units. We manufacture only open-type units, so we never got into the argument," B&G explains. "Our one-year coverage appears to be entirely adequate; we find no need for the 5-year warranty."

'Tends To Make Owner Careless'

The 5-year warranty is "unfair to us manufacturers and it is unfair to the wholesaler and dealer as well. We feel there should be a way to establish an industrywide one-year guarantee," offers a midwestern manufacturer.

"We are opposed to the 5-year warranty for the principal reason that it obligates the dealer-contractor for too long a period and removes from him a revenue possibility," states an Illinois producer.

"Further, we think it tends to make an owner careless of his own maintenance obligations."

A relative newcomer to the industry took advantage of coming in late to avoid the controversy: "We believe we have taken the right step by assuming only a one-year warranty. Our present intention is to continue this setup."

Grumbles a southern manufacturer, "Since the compressor manufacturers themselves only give a 12 to 20-month warranty, we should not be forced to extend this warranty to 60 months." But, so far, the company is offering 1&4.

Sears, Roebuck Covers Replacement Costs

Although Sears, Roebuck & Co. has gone to compressor-only rather than refrigerant cycle on the extended-four, the company still insists, "No charge of any kind is made for replacement of parts in warranty. The store's responsibility is to render prompt courteous service on a 24-hour basis during the cooling season. Same obligation to supply parts and service after warranty expires, but customer then pays, of course."

Joe Fisher, engineering vice president of Southwest Mfg. Co., Aurora, Mo., states, "We feel that—rather than continual changes in warranties—what is needed is a strict adherence to present plans.

"It is now our intention to follow without exception and deviation the dictates of our warranty policy." (Southwest uses 1&4.) "Every manufacturer who really designs his equipment and thoroughly tests it, knows what it takes to make it perform at peak efficiency, and he puts this information in the hands of the dealer.

"It is the dealer's responsibility to READ it and USE it to his own and the manufacturer's advantage."

Another company which is holding fast is Typhoon Heat Pump of Tampa. Sales Manager Roland E. Pillat states clearly, "There has been no change in our warranty policies since the 5-year warranty has come under criticism the last few years."

Coleman POLAR SOLAR PAK It heats, it cools. Cuts corners on costs
Another Innovation
In America's Only
Bonded Line
Exclusive
$500
Coleman
WARRANTY
BOND
BOND ISSUED BY TRAVELERS INDEMNITY COMPANY, HARTFORD, CONN.
SIMPLE . . . DIRECT . . . LOW-COST
So easy! Just short-couple a 2 or 3 h.p. Coleman Polar-Pak unit to a Coleman furnace and your customer has a Polar-Solar-Pak installation. Furnace blower only is needed for complete circulation of conditioned air — summer and winter. No refrigerant lines. No costly transition ducts. You can do the job at remarkably low cost.
Unlimited application—basement, slab, crawl-space, attic, tri-levels, apartment houses. Furnace and cooling unit each backed by Coleman's famous warranty bond. Ask your Coleman distributor or write
The Coleman Company, Inc.
Wichita 1, Kansas
Coleman builds the most complete and only bonded line of heating and air conditioning. Investigate!

Warranty--

(Continued from Page 11)

COMPANIES OFFERING A 1 & 4 WARRANTY

Airtemp; American Furnace; American-Standard; Bard Mfg.; Aug. G. Barkow; Bryant Mfg.; Carrier; Century Engineering; Cleveland Steel Products (Toridheet); Cobell Industries; Curtis Mfg.; Day & Night; Delco; Forston; Fraser-Johnston; Friedrich; Gaffers & Sattler; Global Air Conditioning; Holly-General; International Heater; International Metal Products; Majestic; Melchoir, Armstrong, Dessau; Meyer Furnace; Muncie Gear Works; Luxaire (and "Moncrief" by Henry Furnace); Payne; Peerless (and Round Oak); Perfection; Remcor Products; Rybolt Heater; Sears, Roebuck; Southwest Mfg.; Stewart-Warner; Thatcher Furnace; Thermador Electrical Mfg.; Trane; Typhoon Heat Pump; United States Air Conditioning; Weather-King of Florida; York.

COMPANIES OFFERING A ONE-YEAR WARRANTY

Alton Mfg.; American Air Filter; Bar-Brook; Bell & Gossett; Dunham-Bush; Heil-Quaker; Jet-Heet; North Coast Mfg.; Ready-Power (1 year or 1,500 hours, whichever comes first); Therm-Air Mfg.; Thermo-Products; Weatherbuster.

LABOR ALLOWANCE: COMPANIES ANSWERING 'YES'

American Furnace; Carrier (on room units); Century Engineering; Cleveland Steel Products (Toridheet); Cobell Industries; Fraser-Johnston; Friedrich; Global Air Conditioning; Heil-Quaker; International Heater; International Metal Products; Luxaire (and "Moncrief" by Henry Furnace); Stewart-Warner.

LABOR ALLOWANCE: COMPANIES ANSWERING 'NO'

American Air Filter; American-Standard; Bar-Brook; Bard Mfg.; Aug. G. Barkow; Bell & Gossett; Bryant Mfg.; Carrier (on central units); Curtis Mfg.; Day & Night; Green Colonial; Dunham-Bush; Jet-Heet; Meyer Furnace; Muncie Gear Works; Payne; Perfection; Remcor Products; Rybolt Heater; Southwest Mfg.; Thermador Electrical Mfg.; Trane; Typhoon Heat Pump; Weatherbuster; Weather-King of Florida.

FREIGHT ALLOWANCE: COMPANIES ANSWERING 'YES'

American Furnace Co.; Bar-Brook; Carrier; Cleveland Steel Products (Toridheet); Green Colonial; Dunham-Bush; Heil-Quaker; Stewart-Warner.

FREIGHT ALLOWANCE: COMPANIES ANSWERING 'NO'

Airtemp; Aug. G. Barkow; Bell & Gossett; Curtis Mfg.; Global Air Conditioning; Meyer Furnace; Muncie Gear Works; Perfection; Ready-Power; Remcor Products; Rybolt Heater; Typhoon Heat Pump; Weatherbuster.

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WHEN YOU NEED...
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TESTING INSTRUMENTS and EQUIPMENT
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All-Electric Apartments Will Include Heat Pumps

NEW YORK CITY—Westinghouse Electric Corp. has been awarded a contract to "electrify" a major "total electric" apartment building in Mississippi, William H. Loeber, manager, Westinghouse residential marketing department, announced.

Consisting of 192 garden-type units two stories high, the project, known as Hyde Park Apartments, is now under construction in Gulfport, according to R. W. Hyde, Jr., developer, and will be completed in May, 1961.

Loeber pointed out that seven major divisions of Westinghouse worked together through a single representative of the company's residential marketing department."

Included in the apartments, the Westinghouse executive said, will be 2-ton heat pumps.

Authorized Supply Operating From New Los Angeles Address

LOS ANGELES—Authorized Supply Corp. is now operating from new ultra-modern headquarters at 1514 S. Maple Ave. here. The air conditioning and refrigeration supplies wholesaling firm was formerly located at 1437 S. Los Angeles St.

Relocation was necessary to meet Authorized Supply's need for additional space and warehouse and shipping facilities. It will enable the firm to handle its continually increasing flow of business, while maintaining prompt and efficient service to all customers, according to Robert E. Shaw, president of the firm.

Offices occupy 12,000 sq ft of floor space in a newly-constructed building. Modern shipping facilities, including a loading dock, and increased parking area are other features of the new headquarters. The Santa Monica Freeway, located only one block away, when completed, will expedite deliveries to all points in Southern California.

Authorized Supply also operates branch offices in West Los Angeles, Anaheim, Calif., and Phoenix and Tucson, Ariz.

NEW ADDRESS, NEW 'LOOK' for Authorized Supply Corp., Los Angeles supplies and equipment wholesaler. Forming a welcoming committee at the ultra-modern headquarters at 1514 S. Maple Ave. are Manager Ralph Hitchcock, President Robert E. Shaw, Vice President George Blackmon.

IT HAS BEEN SAID OF PURCHASING MEN THAT THE MOST IMPORTANT INFORMATION THEY MUST HAVE IS

"WHO ARE YOU AND WHY SHOULD I BUY FROM YOU?"

WOLVERINE TUBE ANSWERS IT THIS WAY

"We're WOLVERINE TUBE . . . manufacturers of quality controlled seamless drawn and extruded aluminum tube.

We've been in business since 1916. We are tubing specialists—devote our entire facilities and energies to the production of one product—the very finest of tubing. Our customers are found wherever quality tubing is used, and we're proud of our complete tubing line and our reputation for product excellence and business integrity.

We want to sell *you* tubing made the TUBEMANSHIP way.

MAY WE HAVE YOUR NEXT ORDER?"

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DIVISION OF
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Manufacturers of Quality Controlled Tubing

PLANTS IN DETROIT, MICHIGAN AND DECATUR, ALABAMA
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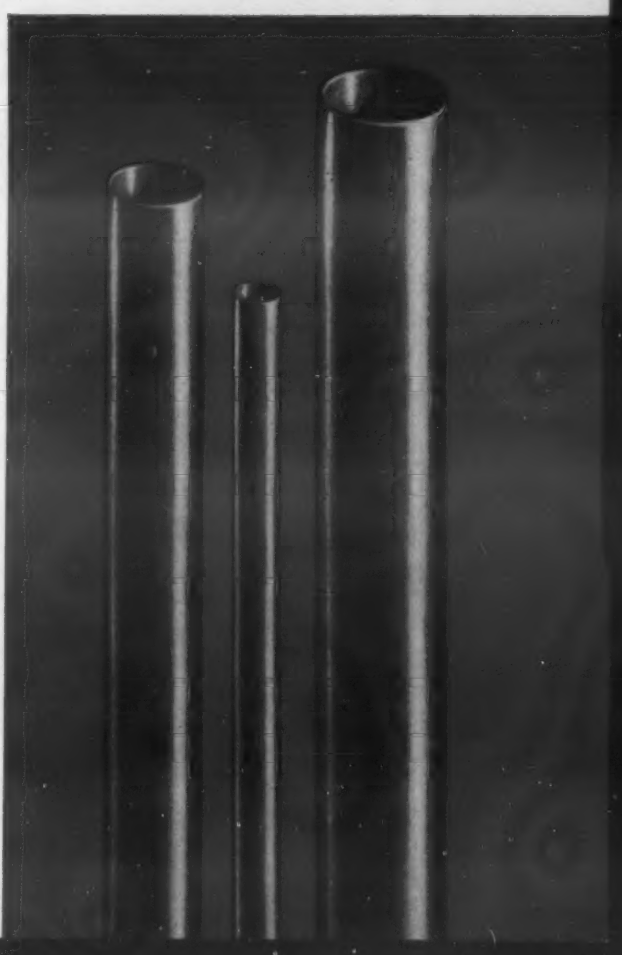

Editorial

There's a Growing Demand Today For Simple A-C Systems

(Concluded from Page 1)

have been excellent — too good, perhaps.

"We're in the same position a certain line of motor cars were in a few years back —engineering triumphs, few sales."

Here are three pertinent developments of 1960 and the present year so far:

1. With the exception of window and automotive air conditioners, every type of air conditioning equipment has suffered disappointing sales as compared to expectations and forecasts.

2. The "all year" residential air conditioner (providing heating and cooling in one unalterable package) is somnolent. People aren't buying it at a great rate. Instead, they go for the greater flexibility and lower cost of "split systems" (separate furnaces and cooling units—the latter preferably installed outdoors, in the attic, or through the wall).

3. Principal problem of the air conditioning industry today is vanishing profits.

Chief executive officers of the various complete unit manufacturers truly are worried about this situation.

(And, as readers of the NEWS should know, so are contractors and dealers who have been writing articulate Letters to the Editor about their profitless prosperity.)

In short, past attempts to sell the public on an idealized concept of air conditioning simply haven't worked. The new emphasis will have to be on giving the public what it wants.

And what the public wants, it is becoming apparent, is a plug-in cooling device which can be installed and used economically.

What is killing the *ideally engineered* air conditioning system (commercial and residential) is excessive installation costs, coupled with poor installation practices. As one engineer put it in a recent letter to us:

"My personal observations are that only one out of six or seven installations have been made correctly without a glaring error or oversight."

Eventually, we can hope, the general public will gain a broad understanding of benefits of all-inclusive, true air conditioning. However, the harsh fact is that our industry itself simply isn't ready to provide it at *installed* prices which large numbers of people are willing to pay.

All the public knows is what it sees, and what it sees presently isn't pretty—bum installations, installation costs running higher than the product itself (this makes buyers furious) and servicemen who don't arrive until after the heat wave has passed.

No wonder people are buying simple, window-type coolers—and to heck with the frills—while scientifically engineered products pile up in warehouses and manufacturers send out for more red ink.

The big educational job facing our industry at this moment is not alone that of educating the public. It is the education of our own dealers and contractors.

This is the job AIR CONDITIONING, HEATING & REFRIGERATION NEWS is undertaking, as the only weekly newspaper which serves the entire industry.

Our crusading editorials have as their purpose the *upgrading* of industry practices and activities. Many influential people in our industry have been kind enough to avow that these editorials have earned the right to our slogan: "The Conscience of the Industry."

In brief, the air conditioning industry must present itself to the public with clean hands. Before we attempt to re-educate the potential buyers of our products as to what they should want, we must get our own house in order.

That means, in essence: cut out the frills. Make it simple!

A thoughtful hostess, when she introduces two people, gives them a lead, so they won't stare blankly at each other with nothing to talk about. The introducer tries to indicate a mutual interest, a possible bond between two strangers.

When you introduce a speaker, you are doing practically the same thing. You draw the audience and the speaker together so they can "communicate."—M. G. DAUGHERTY.

They'll Do It Every Time
by
Jimmy Hatlo
I SOLD OLDMOBILES--THERE WAS A CAR! A DOUBLE EXHAUST SYSTEM---BUILT LIKE A RACING CAR---
THEY'RE LIVING IN THE PAST--- EVERYTHING THEY SOLD IS BETTER'N WHAT THEY'RE SELLIN' HERE!
YEAH--- TO HEAR THEM TELL IT---THEY SOLD SO MANY OF THEM OLD CLUNKS, THE FIRMS HADDA GO OUT OF BUSINESS---
THEY BETTER START SELLING OUR HEAPS OR NEXT STOP--- THE OLD WORN-OUT SALESMEN'S HOME!
I HAD THE JUGGERNAUT AGENCY--BEST CAR EVER MADE--- SO POPULAR WE HAD THE CUSTOMERS WAITING IN LINE---
I WAS WITH BLUTZ--WHAT A BEAUTY THAT WAS---
COULDN'T SELL DOLLAR BILLS FOR A DIME A DOZEN---
LISTENING TO THE FORMER YO-YO SALESMEN LIE ABOUT THE GOOD OL' DAYS ----
THANX AND A TIP OF THE HAT To B. MURRAY, 5574 BORDEN AVE., MONTREAL, CANADA
PARTS
ZIPPER 8
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12-6

SALESMEN NEED COMPETITIVE COMPARISONS

Acme Industries, Inc.
Jackson, Mich.

Editor:

I was particularly pleased by editorial on Elmer Wheeler's "sell the sizzle."

However, I overcame my initial impulse to drop you a congratulatory line. But after the splendid "Short Strokes" editorial, I do have to drop you a note of appreciation for presenting such timely and worthwhile messages.

Perhaps these two messages (and I hope more of the same will follow) will have their impact upon our industry and encourage some of our industries' young and ambitious men to try out such ideas and approaches to their sales problems.

I smiled at your reference to some of our industry's good citizens who suggest it may not be "cricket."

I continue to believe small differences sell big jobs. Until the customer is made to realize by the salesman what his service or product offers over and above his competitor (thus the necessity for competitive comparisons) and visible proof is offered, the salesman risks losing the sale.

The strongest salesman is one who knows his competitors' strengths and weaknesses as he knows his own. Thus comparisons are a necessary and important part of any successful sales operation.

George, please keep up your fine work on behalf of better sales techniques within our industry.

D. G. MERRILL,
Field Sales Manager

ECONOMY JUSTIFIES USE OF REFRIGERANT 22

Hussmann Refrigerator Co.
St. Louis 6, Mo.

Editor:

There is really one justification for Refrigerant 22. This is economics. There are *very sizable savings in initial costs* of equipment and piping which can be attained when Refrigerant 22 is used on most low temperature applications. If cost saving is important, Refrigerant 22 must be looked at carefully. If simple convenience and familiarity with Refrigerant 12 vs. 22 is more important than cost saving, then this Refrigerant 22 can be ignored.

It cannot be argued that Refrigerant 22 is more costly to service or has higher failures because of the refrigerant than Refrigerant 12. IT HAS BEEN CONCLUSIVELY DEMONSTRATED IN LOW TEMPERATURE APPLICATIONS THAT WHEN THE COMPONENTS ARE DESIGNED PROPERLY, ARE INSTALLED PROPERLY, AND SERVICED PROPERLY, SYSTEMS WITH REFRIGERANT 22 PERFORM EQUAL TO OR BETTER THAN REFRIGERANT 12, AT LESS OR NO HIGHER SERVICING AND PARTS REPLACEMENT COST.

Refrigerant 22 is a different refrigerant. To gain the above cost advantages requires the inconvenience of learning its techniques.

We still hear service people, and to an extent some manufacturers, talking down, belittling, or objecting to Refrigerant 22. Today, this can only be attributed to their lack of knowledge in its use. Experience shows that those who discredit this refrigerant have let one of the four links in the chain go unattended.

JOHN R. CAULK, JR., President

AIR CONDITIONING HEATING & REFRIGERATION NEWS
F. M. COCKRELL, Founder

'The Conscience of the Industry'

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SOMETHING

NEW

FOR YOU TO CROW ABOUT FROM

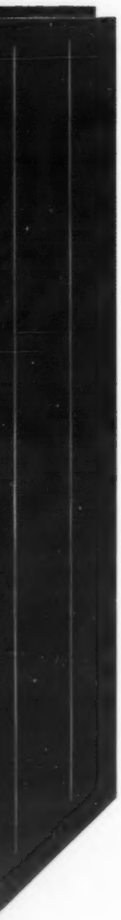
bryant

TWO NEW

395 SERIES Last word in a deluxe furnace for the better new home and replacement market.

393 SERIES Top-styling, Bryant quality and features in a furnace priced for low in-place cost.

LINES!!!



STYLED BY RAYMOND LOEWY... foremost American designer. Smart colors and design are combined in a manner that says "quality" at first glance. The "furnacey" look is gone. These units sparkle with beauty that makes them easier than ever for you to sell at full margin.

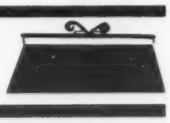
MORE JOBS WITH FEWER MODELS Bryant's unique 1961 design offers upflow, downflow and basement models in both the 393 and 395 series. By use of counterflow and drop duct kits, Bryant's basic furnace will meet any of these applications. More flexible local stocks mean faster delivery to your job.

NEW "MORE FOR THE MONEY" VALUE Bryant, always tops in quality and features that appeal to customers, now puts you in a better pricing position than ever before.

NEW COMPLETE LINE You can sell both the "price" buyer and the man who wants to "go deluxe". Series 393 and 395 have no "gaps" in the line. You can size to the job. Series 393, 80,000 Btu to 150,000 Btu; Series 395, 80,000 Btu to 400,000 Btu.

NEW QUIETNESS Bryant's big, powerful blower is very quiet, and is designed to handle the volume of air required by summer cooling. Other features include the rigid, one-piece welded casing and Bryant's fuel-saving burner that splits the fire to "scrub" the sidewalls of the heat exchanger.

FLEXIBLE FINANCING to fit your own and your customers' needs.



...AND THAT ISN'T ALL. FOR THE FULL STORY ON THE NEW BRYANT PROPOSITION
call our local distributor or factory branch.

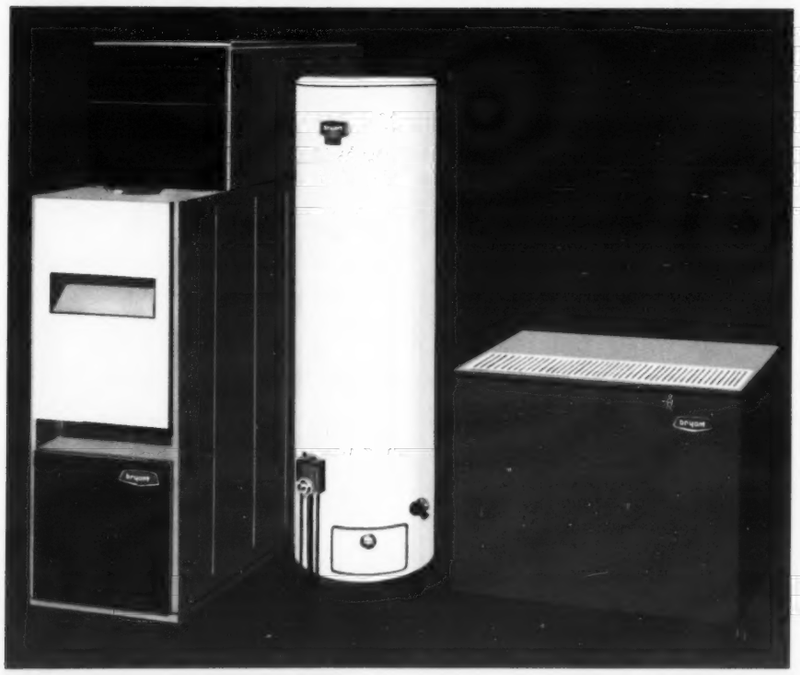
bryant

BRYANT MANUFACTURING COMPANY
Indianapolis 7, Indiana

NEW IDEA

TO HELP YOU MAKE 3 SALES INSTEAD OF 1

BRYANT HOME COMFORT CORE



The Bryant Home Comfort Core is an easy way to get prospects to think in terms of buying complete year 'round comfort instead of a single piece of equipment. It combines an air conditioner, a furnace and a water heater.

It is a lot easier to sell two or three related products at a time than you may think. Dealers tell us that 3 out of 5 air conditioning buyers are pushovers for a new furnace.

Builders *have* to include a furnace and water heater. Smart builders—north and south—are now including air conditioning *TO HELP SELL HOMES.*

With the Bryant Home Comfort Core you can offer them the whole package and with it one of the most sensible, down-to-earth new home merchandising programs you've ever seen. It's flexible enough to fit both small and large builders.

12 REASONS WHY DEALERS LIKE BRYANT

1. **A MOST COMPLETE LINE** of products and range of prices to fit your market.
2. **SALES AND SERVICE HELP** from nearby distributor or factory branch.
3. **FAST DELIVERY** from local stocks.
4. **EXCLUSIVE FEATURES** make selling easier.
5. **NATIONAL REPUTATION** helps you sell.
6. **LOCAL ADVERTISING** with factory and distributor help.
7. **STABLE SALES POLICIES** that protect you.
8. **SOUND SALES** and technical training.
9. **BUSINESS MANAGEMENT** aid helps you keep profits.
10. **BRYANT'S** financial strength.
11. **LIBERAL FINANCING** and credit tailored for you.
12. **GAS AIR CONDITIONING.**

Ask your Bryant distributor or factory branch about how the Bryant Home Comfort Core and its merchandising plan will help you do extra—and profitable—business.

BRYANT MANUFACTURING CO.
Indianapolis 7, Indiana

Join up with Bryant

bryant

the company on the move!!!!!!

From the Files of the News

25 years ago . . .

Extended warranty plans were making news. Norge Corp. announced a 10-year warranty on the Rollator compression unit only, and a five-year warranty on certain mechanical parts such as the motor, belt, receiver, condenser, and needle valve. . . . Westinghouse was advertising hermetically sealed commercial refrigeration units with an "exclusive five-year protection plan."

A "letter to the editor" from Harry Alter, head of the Chicago wholesaling establishment bearing his name, asked "where and when will the race for longer and bigger guarantees end? who will be the long-pull goat—the manufacturer, distributor, or the dealer? cannot manufacturers get together and agree on a standard guarantee?" The writer also asked the NEWS to open its columns to the views of all on the subject of guarantees.

Letters from two readers discussed problems in the refrigeration repair field, one stating that "the field in general is made up of a series of small concerns, in fact mostly one-man shops, most of them striving for existence, but there are some very reliable and capable ones to be found" . . . it was also stated that "if manufacturers would spend a small fraction of what they allot for experimenting to having one of their men take a trip around the country interviewing some of the men who specialize in service and maintenance, many important improvements in the mechanical construction of their units could be made at very little cost."

10 years ago . . .

What commercial and industrial refrigeration and air conditioning are doing for this country in peace and war is told in "Refrigeration and Air Conditioning Vital to America," a 40-page book published recently by the Air Conditioning & Refrigerating Machinery Association, Inc., for manufacturers, distributors, and dealers use. . . . Representatives of both the CIO and AFL have gone on record before the House Ways & Means Committee as being violently opposed to the proposed boost to 25% in the excise tax on refrigerators and other appliances.

A "muggy weather control" on its 1951 line of packaged air conditioners is one of the new features being demonstrated to General Electric air conditioning and home heating distributors. . . . "Panel cooling is just another device that will fit in some systems but not others," cautioned C. S. Leopold, who told ASHVE members in his talk, "Design Factors In Panel and Air Cooling Systems," that conventional systems are still the backbone of the industry.

"Tomorrow's buildings may be pressurized as well as scientifically heated and cooled, if progress in indoor climate control continues at its present pace," C. S. Koehler of Minneapolis-Honeywell told the American Institute of Architects.

Calculating duct sizes for either forced or gravity warm air heating systems has been simplified with a new slide rule calculator offered by Armco Steel Corp. . . . Removing air from a refrigerating system was discussed in the "Refrigeration Problems and their Solution" section.

Austin Jones In Midland Hospital

MIDLAND, Mich. — Austin Jones, Kerotest Mfg. Co. representative and well-known as photographer of industry events (he shot many of the pictures at the recent Heating & Air Conditioning Exposition which were published in the NEWS) is in Midland hospital here with a pinched spinal nerve and complications resulting therefrom.

Attending physicians have indicated that he will be required to remain in the hospital through the middle of March.

Trying to find the right man for a hard-to-fill vacancy—the NEWS' Classified Ads are read by your man.

Place your ad today!

Thatcher Furnace Names J. E. Price Sales Manager

GARWOOD, N. J.—The appointment of J. E. "Jack" Price as sales manager of Thatcher Furnace Co. was announced here by Russell M. Cook, president.

J. E. Price

He returns to Thatcher after having served as general manager of a Chevrolet-Oldsmobile dealership in South River, N. J., since 1957.

Price began his career with Thatcher in 1945 as a payroll clerk. In 1954 he opened a sales office and warehouse for Thatcher in Chicago, and operated them for four years, according to the announcement.

Carleton-Stuart Announces Policy of Stocking Some Applied Equipment

NEW YORK CITY—The introduction of a policy of local stocking of applied equipment up to 50-hp chillers and condensing units, and up to 14,300 cfm air handling equipment, will be a highlight when 1961 Carrier Air Conditioning Co. products are unveiled to more than 300 dealers from the metropolitan area in a three-day "carnival" opening Tuesday, March 7.

A display embracing more than 100 items of air conditioning and heating equipment, described as "the largest ever assembled to show a single manufacturer's line," will introduce the products.

The showing will be set up in 30,000 sq ft of the warehouse of Carleton-Stuart Corp., Carrier distributor for New York City, Long Island, and Westchester county.

Dealer visits to the warehouse at 10-02 45th Ave., Long Island City, will be by appointment and will be scheduled to permit full personal demonstration of new features to each of the dealers.

A full line of new residential equipment built around Carrier's new "Micromite" compressor, whose design has created a simpler and less expensive production procedure, will also be introduced, together with new 40-ton and 50-ton capacity units for commercial installation, it was stated. Equipment on display, without duplication, is valued at well over $100,000, said Martin H. Quinn, Carleton-Stuart general manager.

ALCO *the one complete line of* REFRIGERANT CONTROLS

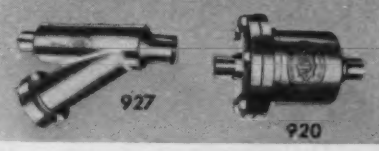
Thermo® EXPANSION VALVES
for all refrigerants from 1/4 to 200 tons

SOLENOID VALVES
Sizes & Type for every application and refrigerant

FOR AIR CONDITIONING AND REFRIGERATION

ALCO VALVES • CONTROLS STRAINERS • DISTRIBUTORS
FOR EVERY APPLICATION—DIRECT EXPANSION OR FLOODED SYSTEMS

REFRIGERANT STRAINERS
maximum Screen area—
Sizes & Type for every application



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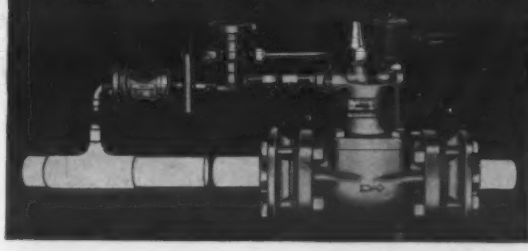
Float SWITCHES
for trouble free liquid level control

P.O.S. PILOT OPERATED THERMO® VALVE
with integral solenoid stop . . . for larger installations



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The one complete line of refrigerant controls: Thermostatic Expansion Valves • Refrigerant Distributors • Solenoid Valves Refrigerant Filter-Driers • Suction Line Regulators • Flooded Evaporator Controls and Reversing Valves

8217-2

But Ratings May Not Conform

42 Firms Submitting Specs Subscribe To ARI Certification Program

Forty-two of the manufacturers presenting data in this issue subscribe to the certified air conditioner program sponsored by the Air-Conditioning & Refrigeration Institute.

These manufacturers are identified by an asterisk before their name in the Index to Specifications on page 22.

However, due largely to technical difficulties in preparing these specifications, the capacity ratings on their equipment appearing here may not necessarily be their certified rating.

For true certified ratings, the reader is referred to the latest directory of certified unitary air conditioners published by the ARI.

Capacity ratings footnoted "Rated under ARI standard 210-58." are certified ratings. But those footnoted only "Rated under ARI standard" may or may not be certified ratings.

Fred Reed, chief engineer for ARI, pointed out to the NEWS that certified ratings for unitary equipment are given only in even thousand Btu and that they must be rated under standard 210-58. In split systems ratings are based on the combination of a condensing unit with a particular coil or blower unit.

Unfortunately, the NEWS had asked manufacturers only if their equipment was rated under ARI standard, without specifying which one. It had not asked that condensing units and blower-evaporator units be matched.

Although the process of collecting specifications data was well under way and date of publication was drawing near, a strenuous effort was made by both the NEWS and ARI to work out some way of indicating certified ratings for all whose units are so rated. These efforts, particularly in reference to split systems, were only partially successful.

As one manufacturer indicated, it is hard to match condensing units with evaporator units in a listing in a national publication when one model condensing unit would normally combine with one evaporator in Houston and another in Phoenix.

Specifications--

(Continued from Page 1)

tion with that of previous years, we find the greatest expansion coming in the split system and heat pump categories. Nine more lines are counted in both categories than appeared in last year's issue.

Number of packaged unit lines has increased by four, while number of liquid chiller manufacturers remains the same at 32.

While presenting up to 27 items of information about each model of air conditioner listed, the NEWS this year has managed to squeeze in one or two additional pieces of data of value to readers.

In all categories except liquid chillers, manufacturers were asked to give the locked rotor amps of their units. Manufacturers of heat pumps were queried as to the type of defrost control they employed.

As in the past, specifications are listed under the brand name of the unit, rather than the manufacturer's name, and, generally in alphabetical order. Listings are indexed according to manufacturer's name, with brand names given in parentheses where they differ from the company name. The index will be found on page 22.

While most of the data columns are self-explanatory, a key to abbreviations appears on page 40. Where special explanations of data are required, they are found in footnotes directly beneath the particular manufacturer's listing.

It should be emphasized that condensing unit sections and evaporator sections listed on the same line are not necessarily matching. In some cases they may match. In some instances, an effort has been made to match them. But this is not true in all cases. For further information on this point see certified ratings story on this page.

In all but the liquid chiller listings, compressor data is limited to make, horsepower, and compressor manufacturer's model number. For those interested in further specifications, a separate listing of compressor data furnished by the compressor manufacturer appears on pages 59-61.

Only 16 manufacturers who listed equipment last year do not appear in this issue. On the other hand, 19 companies who did not submit specifications last year, supplied them this year.

Twelve of the latter submitted specifications for the first time. The others had listed their equipment in 1959 or 1958.

The 12 new companies are Air Conditioning, Inc.; Heat Pump Systems, Inc.; Jet-Heet, Inc.; K & B Distributors; Kramer-Trenton Co.; Kritzer Products; Murrayhill Mfrs., Inc.; North Coast Mfg. Corp.; Rollaire Co.; Rybolt Heater Co.; Tempromatic Corp.; and Thermador Electrical Mfg. Co.

Among those in last year but not this year are several room air conditioner manufacturers who indicated they are no longer making the larger type equipment.

These include Emerson Electric Co., Emerson Radio & Phonograph Corp., Welbilt Corp., and Whirlpool Corp. Fedders Corp., while still making central type equipment, did not submit specifications.

Morrison Steel Products, Inc. wired the NEWS that it would be impossible to have its specifications ready in time for this issue.

Mammoth Industries, Inc. also indicated that it would not be listed this year. Frick Co. announced that it had discontinued the manufacturer of unit air conditioners for the time being.

Worthington Corp., Century Engineering Corp., and Laurel Products, Inc. stated that they had, or would soon have, heat pumps available, but were not ready to list specifications.

As in the past, the data presented in this issue is that supplied by the manufacturer and does not represent any evaluation on the part of the NEWS.

not in the valves

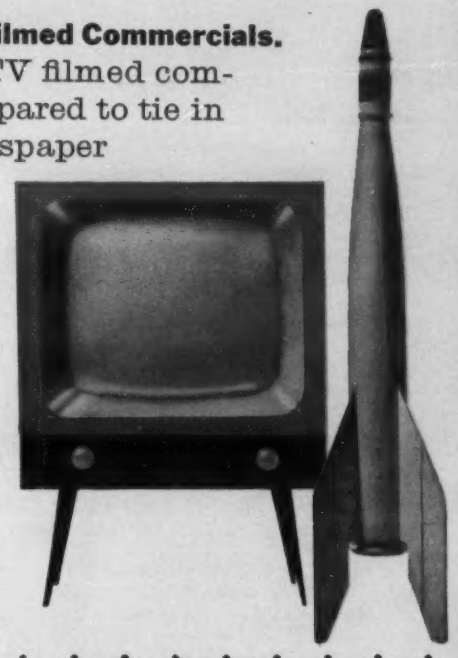
DAVISON PA®400 SILICA GEL keeps your coils dry, reduces moisture to less than 10 ppm ... eliminates the possibility of ice forming on the expansion valves. Maintains full flow filtration constantly. Davison PA400 Silica Gel supplies high no-bypass filtering efficiency without softening, swelling, or breaking up. Write Dept. 2603 for further information and the PA400 technical bulletin.

GRACE
DAVISON CHEMICAL
Industrial Chemicals Dept. 2603
Baltimore 3, Maryland.

PUT YOUR CENTRAL AIR CONDITIONING SALES "INTO ORBIT" WITH THIS TERRIFIC 1961 GENERAL ELECTRIC SALES PUSH!!!

5 Complete New Advertising/Promotion Program. Here's everything you need to make '61 your biggest year ever! This program includes a newly designed newspaper advertising mat service, featuring hard-hitting ads with the theme: "The difference in the air is General Electric Central Air Conditioning". Also...exciting merchandising promotions. And... generous local identification allowances. Just a few of the program's highlights are described on this page.

4 Attention-Getting TV Filmed Commercials. A series of 40-second TV filmed commercials have been prepared to tie in directly with local newspaper advertising. They will be aired in markets across the nation with 20-second "tags" featuring local dealers. Here, again, the theme is "the difference in the air".



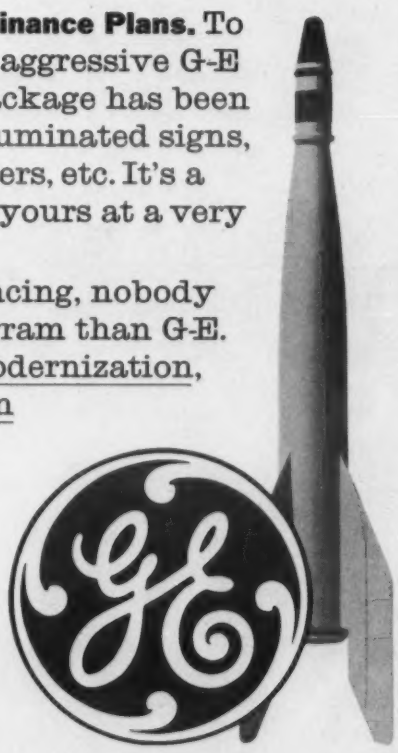
3 Valuable Consumer Incentives. Valuable incentives, such as have been used so successfully by many dealers in the past, will again be offered to help stimulate sales in both the consumer and builder markets. As usual, they will be items carrying a substantial retail price, but will be made available to you at just a fraction of cost.

2 Dealer Trip Incentive. Again, in '61, there will be another fun-filled, all-expense trip for eligible dealers and their wives. This year, 600 G-E dealers visited Bermuda. Last year, it was Hawaii. And for 1961, the destination is...SPAIN!

1 Identification Program & Finance Plans. To "spotlight" you as an alert, aggressive G-E dealer, an Identification Package has been developed that includes illuminated signs, letterheads, uniforms, banners, etc. It's a terrific value, and it can be yours at a very nominal cost.

And when it comes to financing, nobody offers a more complete program than G-E. Work-In-Process, Home Modernization, Skip-Payment, and Add-On are among the plans featured.

This is your bang-up G-E promotional package for 1961—everything designed to make your selling job easier, to make your profits rocket!



FIRE... off this coupon today and get ready for the greatest season yet! (Or contact your nearest General Electric heating and air conditioning distributor for full details.)

General Electric Company — ACN-3-6
Air Conditioning Dept.
P.O. Box 3236, Sta. A
Tyler, Texas
Attn. Mr. J. J. Heffernan

I would like complete information on G.E's great new sales program for 1961.

Name_____

Firm_____

Address_____

City_____

County_____ State_____

GENERAL ELECTRIC

Air Conditioning Department, Tyler, Texas

1961 Packaged Air Conditioning Specifications

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*Participates in ARI certification program. Trade names when different than company name, are shown in parentheses.

Split Systems—Residential & Commercial

Split Systems—Condensing Units

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Nominal Rating (Btuh)	Kw Input Total	Locked Rotor Amps	Net Weight	Condenser Face Area (Sq Ft)	Rows Deep	Cfm	Air Discharge	Compressor Make	Hp	Comp. Mfrs. Model No.
Addison (Private Brand)—Addison Products Co., Addison, Mich.														
*24AC-A	28⅝	26¼	27⅞	22,000†	3.0	60.5	205	3.6	2	1,750	Side	Tecumseh	2	B21U18
*35AC-A	36¼	30¼	27⅞	33,000†	4.4	82.5	285	4.1	3	1,900	Side	Tecumseh	3	JE300
*47AC-A	28⅜	48⅝	31⅞	45,000†	6.1	121.0	430	7.7	2	3,600	Side	Tecumseh	4	FFB400
*60AC-A	38⅜	48⅝	31⅞	56,000†	7.4	139.2	455	7.7	3	4,200	Side	Tecumseh	5	FB500
*85AC-A	34½	66	33⅞	82,000†	9.6	159.6	710	12.5	3	7,500	Side	Copeland	7½	MR50-761F
90AC-A	50¼	101	40	84,000†	9.6	145	1185	15.1	3	7,200	Top	Copeland	7½	MR50-760
120AC-A	50¼	101	40	108,000†	11.8	180	1270	21.5	3	10,000	Top	Copeland	10	9R8-1000
200AC-A	50¼	114	40	180,000	26.2	250	1435	31.2	3	15,000	Top	Copeland	15	4R48-2006
240AC-A	86¼	114	40	210,000	30.4	320	1510	31.2	4	14,500	Top	Copeland	20	4R48-2008
†Rated under ARI standard. Models 90AC through 240AC are sold under Addison name, others are sold for marketing as private brands.														
AFCO Comfortmaker—American Furnace Co., 1300 Hampton Ave., St. Louis 10, Mo.														
*A22-1	34½	26¼	27⅞	24,000	2.55	55	239	4.5	2	2,000	Top	Tecumseh	2	B21U18
*A30-1	30	26¼	27⅞	33,000	3.67	74	290	5.88	2	2,200	Top	Tecumseh	3	PJG300
*A35-1	27⅝	32½	33⅛	37,500	3.83	78	347	7.6	3	3,200	Top	Tecumseh	3	PJE300
*A35-3	27⅝	32½	33⅛	35,000	3.97	68	333	7.6	2	3,200	Top	Tecumseh	3	JE300
*A45-1, 3	34⅝	32½	33⅛	51,000	5.32/5.13	110/75	472	10.3	3	3,600	Top	Tecumseh	4	FFB403
*A62-1, 3	34⅝	37	37	66,500	6.6/6.54	127/100	530/515	10.0	3	4,400	Top	Tecumseh	5	FFB503
*A85-1, 3	40	41⅝	41⅝	90,750	10.2/9.83	†	700	11.25	4	6,700	Top	Tecumseh	5.5/2	FFB500/JB300
*A130-1, 3	(2) 34⅝	(2)37	(2)37	133,000	13.2/13.8	**	1080/1080	20.0	3	8,800	Top	Tecumseh	(2) 5	FFB503
*A180-1, 3	(3) 34⅝	(3)37	(3)37	199,500	19.8/19.62	**	1590/1545	30.0	3	13,200	Top	Tecumseh	(3) 5	FFB503
*APT16	18	39¼	14⅜	18,500	2.66	50	200	2.7	2	1,200	Side	Tecumseh	1½	B74T16
*APT22	19⅝	36	16¼	24,000	3.13	55	238	3.9	2	1,500	Side	Tecumseh	2	B21U18
†137/56 on 5.5 hp compressor, 109/43.6 on 2 hp compressor. **125/109 each.														
Air Commander, Ambient Master—K & B Distributors, 2119 So. Atlantic Blvd., Los Angeles 22, Calif.														
*35FHB1, 3	28½	40	32	35,600	4.5	78/75	465	5.8	3	3,600	Top	Tecumseh	3	PJE301
*48FHB1, 3	34½	46	32	48,800	6.2	110/78	612	8.3	3	4,800	Top	Tecumseh	4	FFB403
*56FHB1, 3	42⅜	45	40	61,000	8.1	125/80	769	10.0	3	6,000	Top	Tecumseh	5	FFB503
86FHB3	42⅜	67	40	86,200	11.8	145	756	15.0	3	9,000	Top	Copeland	7½	MR50-761
112FHB3	42⅜	92	40	114,000	13.8	180	1368	20.0	3	12,000	Top	Copeland	10	9R8-1000
196FHB3	42⅜	141	40	188,000	23.5	250	1953	30.0	3	18,000	Top	Copeland	15	4R48-2006
Airtemp—Airtemp, Div. of Chrysler Corp., P. O. Box 1037, Dayton 1, Ohio														
1202-02	25⅛	29	29	22-23,000	2.85/2.91	48	190	3.21	2	1,950	Top	Bendix-W.	2	CH490TA-2
1202-05	25⅛	32½	29¾	28-30,000	3.92/3.40	66	225	6.8	2	2,770	Top	Airtemp	2½	2002-4
1204-02	25⅛	32½	29¾	32-36,000	4.16/4.34	80	245	6.7	2	2,770	Top	Airtemp	3	2003-3
1206-02	38⅛	32	45	45-48,000	5.35/5.65	94	434	12.7	2	5,000	Top	Airtemp	4	3004-00
1206-01(603)	38⅛	32	45	50,000	6.48	105	445	14.7	2	5,000	Top	Airtemp	5	3005-03
1206-01(606)	38⅛	32	45	61,000	6.83	105	445	14.7	2	5,000	Top	Airtemp	5	3005-02
1206-01(606)	38⅛	32	45	63,000	6.98	105	445	14.7	2	5,000	Top	Airtemp	5	3005-02
1206-01(608)	38⅛	32	45	64,000	7.03	105	445	14.7	2	5,000	Top	Airtemp	5	3005-03
1208-00(905)	38⅛	32	45	79,000	8.6	127	780	14.7	3	5,000	Top	Airtemp	7½	3008-03
1208-00(906)	38⅛	32	45	82,000	8.9	127	780	14.7	3	5,000	Top	Airtemp	7½	3008-03
1208-00(908)	38⅛	32	45	87,000	9.2	127	780	14.7	3	5,000	Top	Airtemp	7½	3008-02
1212-00(1208)	41⅛	37⅛	66	113,000	13.4	190	1080	21.5	3	7,500	Top	Airtemp	10	3011
1212-00(1210)	41⅛	37⅛	66	116,000	15.9	190	1080	21.5	3	7,500	Top	Airtemp	10	3011
1212-00(1212)	41⅛	37⅛	66	115,000	15.8	190	1080	21.5	3	7,500	Top	Airtemp	10	3011
1216-00(1618)	51⅞	37⅛	66	154-166,000	18.4/19.6	224	1113	28.4	3	10,000	Top	Airtemp	15	3015
Amana—Amana Refrigeration, Inc., Amana, Iowa														
*HR234-1	21¼	30	31	24,000†	2.15	55‡	240	2.65	4	1,200	Side	Tecumseh	2	B21T18
*HR336-1	25½	33⅝	34	36,000†	4.60	78‡	342	3.58	5	1,920	Side	Tecumseh	3	PJE300
*HR448-1	31	40	34	48,000†	6.30	110‡	359	5.60	5	3,200	Side	Tecumseh	4	FFB400
*HR560-1	31½	40	34	60,000†	8.00	125‡	614	6.25	5	3,550	Side	Tecumseh	5	FFB500
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†Rated under ARI standard 210-58. ‡For compressor, add 9.3 for fan motor.														
American-Standard—American-Standard Air Conditioning Div., 40 West 40th St., New York 18, N. Y.														
*AC-2B	28⅜	30¾	27⅞	21,000	12.6	55.0	205	3.6	3	1,750	Side	Tecumseh	2	B21U18
*AC-3B	28⅜	30¾	27⅞	32,000	19.5	78.0	265	4.1	3	1,900	Side	Tecumseh	3	JE300
*AC-4B	37⅞	48⅝	31⅞	47,200	28.0	110.0	420	7.7	4	3,600	Side	Tecumseh	4	FFB400
*AC-5B	37⅞	48⅝	31⅞	56,300	30.5	125.0	465	7.7	5	4,200	Side	Tecumseh	5	FB500
*AC-7B	34½	53⅞	66	82,000	31.2	145.0	710	12.5	3	7,500	Side	Copeland	7½	MR50-761F

Split Systems—Evaporator, Blower-Evaporator Units

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacity (Btuh)	Refrigerant Control	Net Weight	Coil Face Area (Sq Ft)	Coil Rows Deep	Blower Cfm	Blower Rpm	Blower Motor Hp	Air Filter Dimensions (In.)
24A-A	14	19⅝	22	22,000	Cap.	42	2.2	3	800	---	---	---
35A-A	18	22½	22	32,000	Cap.	50	3.1	3	1,200	---	---	---
47A-A	23	28⅝	22	45,000	Cap.	95	6.0	3	1,800	---	---	---
60A-A	23	28⅝	23	56,000	Cap.	95	6.0	3	1,500	---	---	---
90EB	25	53⅛	41	84,000	X-Valve	365	7.2	3	3,000	700	¾	(3) 16x20x1
120EB	25	64⅞	41	108,000	X-Valve	510	8.9	4	4,000	780	1	(3) 20x20x1
200EB	33⅛	78	54	180,000	X-Valve	625	14.6	4	6,000	675	1 1/7	(4) 16x25x1, (3) 16x20x1
240EB	33⅛	78	54	210,000	X-Valve	695	14.6	6	7,200	720	2	(4) 16x25x1, (3) 16x20x1
---	---	---	---	---	---	---	---	---	---	---	---	---
Dimensions are for upflow and downflow coils without cabinet. Cabinets available for each coil sized to fit AFCO furnaces. ‡Available in horizontal flow only. §Or 33⅓. ‖Or 30%.												
35FB	22½	34	33	35,600	X-Valve	160	3.3	3	1,200	1,725	¼	(2) 16x20
48FB	22½	43	33	48,800	X-Valve	208	4.4	3	1,600	1,725	⅓	(2) 20x30
56FB	22½	51	33	61,000	X-Valve	270	5.5	3	2,000	2,450	⅔	(2) 20x25
86FB	42⅜	49	40	86,200	X-Valve	580	9.0	3	3,000	2,450	⅔	(4) 16x20
112FB	42⅜	53	40	116,000	X-Valve	662	11.9	3	4,000	2,450	1	(4) 20x25
196FB	42⅜	76	40	188,000	X-Valve	765	16.5	3	6,000	2,450	1½	(6) 20x25
1493-1												
(Group 153)	14¼	21	23¼	**	X Valve	55	3.2	2	---	---	---	---
(Group 154)	14¼	25	24	**	X Valve	60	3.2	3	---	---	---	---
1493-4												
(Group 153)	14¼	21	23¼	**	X Valve	65	3.2	3	---	---	---	---
(Group 154)	14¼	25	24	**	X Valve	70	3.2	3	---	---	---	---
(Group 155)	14¼	25	21¼	**	X Valve	75	3.2	3	---	---	---	---
1498-1												
(Group 155)	16⅝	25	21¼	**	X Valve	105	5.3	3	---	---	---	---
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**For capacity of evaporator coil units refer to manufacturer's specification sheets.												
LA234A	18½	18½	16¼	24,000	X-Valve	54	2.5	3	800	---	---	---
LA336A	18½	18½	20¼	36,000	X-Valve	63	3.33	3	1,200	---	---	---
LA448A	18½	18½	24¼	48,000	X-Valve	73	4.07	3	1,600	---	---	---
LA560A	18½	18½	33¾	58,000	X-Valve	93	5.73	3	2,000	---	---	---
LB234-3	23	25½	26	24,000	X-Valve	185	1.87	3	800	650	¼	25x20x1
LB336-3	23	34	26	36,000	X-Valve	205	3.29	3	1,200	680	⅓	(3) 16x20x1
LB448-3/1	28	41	41⅝	48,000	X-Valve	255	4.02	3	1,600	490	½	(2) 25x20x1
LB560-3/1	28	41	41⅝	57,000	X-Valve	295	4.41	3	2,200	640	⅔	(3) 25x20x1
LB672T-2/1	28	41	41⅝	72,000	X-Valve	295	4.41	3	2,800	770	⅔	(3) 25x20x1
LB1012GT-3	28	54	56	‡	X-Valve	600	6.68	4	3,600	850	1½	(3) 25x33x1
‡With two HR448 condensing units 88,000, 3200CFM LB unit air. With two HR560 condensing units 116,000, 4000CFM LB unit air. Conditions: 80° db ambient; 80° db., 67° wb inside. Also available in horizontal flow and downflow models.												
RC-2B H‡	23¼	23	28¾	22,000	X-Valve	140	2.14	3	800	Adj.	¼	(3) 16x20x1
RC-3B H‡	25¼	23	28¾	32,000	X-Valve	142	3.35	3	1,200	Adj.	⅓	(3) 16x20x1
RC-4B H‡	25¼	40	34¾	46,000	X-Valve	180	4.25	3	1,600	Adj.	½	(3) 20x20x1
RC-5B H‡	25¼	40	34¾	56,000	X-Valve	200	5.2	3	2,000	Adj.	⅔	(3) 20x20x1
RC-7B H	25	53⅞	41	82,000	X-Valve	365	7.2	3	3,000	Adj.	¾	(3) 16x20x1
‡A. H. D type evaporators also available less blower.												

the quality
tells . . .
the quality
sells . . .

JANITROL

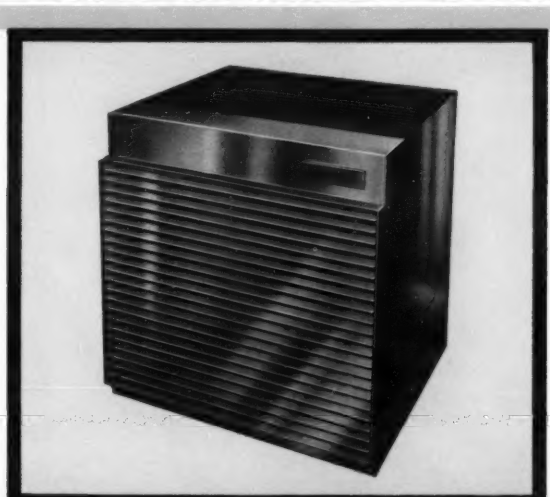
AIR-COOLED
AIR-CONDITIONING

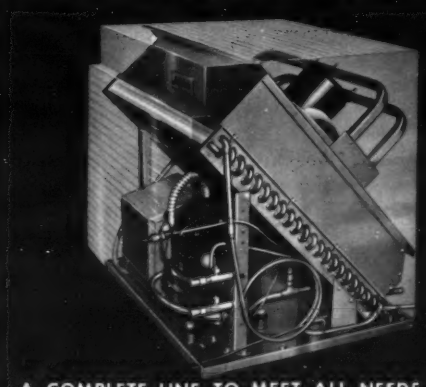
Hallmark of Quality
in Luxury Comfort

UNCHALLENGED COOLING PERFORMANCE...

in all-new JANITROL

52 SERIES CONDENSING UNITS





A COMPLETE LINE TO MEET ALL NEEDS . . .
CAPACITIES FROM 22,200 TO 110,200 BTU HR.

Outwardly beautiful and pleasing to the eye, inwardly rugged and powerful, new Janitrol 52 Series provides low-cost central cooling with matchless reliability and efficiency. Here are some of the many ways new Janitrol 52 Series condensing units are demonstrating their excellence . . .

In Performance . . . condensing coils have greater area to dissipate more heat and to provide higher efficiency. Operation with outside temperatures as high as 125°F.

In Styling . . . modern, simple and functional cabinet that will be in the best of taste in any landscape plan. Finished in beautiful, durable, weather-resistant, automotive-type enamel.

In Economy . . . powerful, top-mounted fan draws in quantities of cooler ground air over the condensing coil, which is shaded from the sun's heat by louvers.

In Quietness . . . compressor and fan are unusually quiet in operation. Cabinet is acoustically treated with a weatherproof, sound-absorbent material.

In Safety . . . upflow exhaust protects nearby plants from hot blasts . . . enclosing grilles safeguard pets and children.

In Service . . . all components are easily accessible. Service panels may be removed without affecting operation, to make checks while unit is in full operation.

A.R.I. CERTIFIED

Full A.R.I. certification is your assurance this equipment meets or exceeds standards of the Air Conditioning and Refrigeration Institute. A five-year written warranty backs up your choice.

JANITROL AIR-COOLED SUMMER AND YEAR 'ROUND COMFORT SYSTEMS TO MEET ALL NEEDS

Janitrol Win-Sum-Matic Year 'Round Systems

A complete central heating and cooling unit in a compact, smartly-styled cabinet smaller than most home refrigerators! Features air-cooled summer cooling, thrifty gas heat with Dura-Tube heating heart, guaranteed for 20 years! Exclusive "Season Selector" control allows changing from heat to cool (or vice versa) in seconds. No special tools or service call needed.

Janitrol Add-On Cooling System

With Janitrol Add-On Cooling, most any forced air furnace can be easily adapted to circulate cool, filtered air to every room in the home. The Janitrol evaporator coil is installed in furnace outlet duct and connected to the properly-sized 52 Series condensing unit. The existing furnace blower and duct system circulates the cooled, dehumidified air. Here's full central air conditioning at low, low cost!

New Janitrol J-Line Self-Contained Air Conditioners

The Janitrol J-Line models are an economical answer to cooling needs. In one compact unit are the blower, compressor and evaporator coils. Operation is remarkably quiet. May be used with ducts or as free discharge. Installs through walls in crawl space, in attic or other limited access locations.

Janitrol Schoolroom Cooling and Heating

Janitrol offers a self-contained room heating and ventilating system (with optional cooling) that features perimeter-type, draftless air distribution. Installation economies are noteworthy (savings up to 60% over large central systems). For new schools, additions and modernization.

WRITE TODAY!

for complete information on Janitrol heating and cooling systems for your business needs. Remember—architects and engineers can specify . . . and dealers can recommend and install *Janitrol* equipment with complete confidence it will provide the finest, most carefree performance possible.

JANITROL MIDLAND-ROSS

HEATING AND AIR CONDITIONING

A Division of Midland-Ross Corporation

Columbus 16, Ohio • In Canada: Moffats Ltd., Toronto 15

Split Systems—Condensing Units

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Nominal Rating (Btuh)	Kw Input Total	Locked Rotor Amps	Net Weight	Condenser Face Area (Sq Ft)	Condenser Rows Deep	Condenser Cfm	Air Discharge	Compressor Make	Compressor Hp	Compressor Mfrs. Model No.
Arctic Circle—International Metal Products Div., McGraw-Edison Co., 500 South 15th St., Phoenix, Ariz.														
R37-1, 3	29½	22	29	36,800	5.7/4.6	...	330	4.7	4	2,800	Side	Tecumseh	3	PJE300
R50-1, 3	29½	36	31	49,500	7.9/7.1	...	430	4.6	6	4,200	Side	Tecumseh	4	PFB400
R63-1, 3	32	45	34	59,300	9.0/7.9	...	530	7.0	6	5,000	Side	Tecumseh	5	PFB500
R90-3	48	34½	53⅝	85,800	8.2	...	745	9.2	6	8,960	Side	Copeland	7½	MR50-760
R122-3	36	40¾	60¼	112,000	10.8	...	945	14.0	6	11,000	Side	Copeland	10	9R5-1000
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
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Arkla-Servel—Arkla Air Conditioning Corp., 812 Main St., Little Rock, Ark.														
500C	65⅝	84¼	30⅞	42,000	...	...	1235	...	...	...	...	Absorption		...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Armstrong—Armstrong Furnace Co., 851 W. Third Ave., Columbus 14, Ohio														
*42-21	25½	27	30	23,000	2.6	53.6	314	3.66	3	1,500	Side	Tecumseh	2	...
*42-31, 33	28	33½	34⅝	35,000	3.65	73/68	312	5.5	3	2,400	Side	Tecumseh	3	...
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*42-41, 43	28	57⅝	34½	46,000	5.25	110/78	525	7.32	3 (2)	2,400	Side	Tecumseh	4	...
*42-51, 53	28	57⅝	34½	60,000	7.00	135/90	525	9.15	3 (2)	2,400	Side	Tecumseh	5	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bar-Brook—Bar-Brook Mfg. Co., Inc., 6135 Linwood Ave., Shreveport, La.														
AC311-B	25½	27	20	24,000†	3.0	55	220	3.7	3	1,600	Side	Bendix-W.	2	H309TA
AC311-T	31½	33½	27	36,000†	4.0	78	425	5.85	3	3,500	Side	Tecumseh	3	PJE300
AC411-T	31½	33½	27	48,000†	5.6	100	480	7.4	3	4,500	Side	Tecumseh	4	PFB400
AC421-B	31½	33½	27	48,000†	5.6	100	480	7.4	3	4,500	Side	Bendix-W. (2)	2	H360TA2
AC511-T	31½	33½	27	60,000†	7.0	127	550	9.5	3	5,000	Side	Tecumseh	5	PFB500
†See specifications story.														
Bard—Bard Mfg. Co., P. O. Box 430, Bryan, Ohio														
*24AC	29⅝	30½	27⅞	24,000	3.0	55	205	3.6	2	1,750	Side	Tecumseh	2	B21U18
*35AC	36⅛	30½	27⅞	35,000	4.4	78	265	4.1	3	1,900	Side	Tecumseh	3	JE300
*47AC	29⅝	45⅝	31⅞	48,000	6.1	110	420	7.7	2	3,600	Side	Tecumseh	4	PFB400
*60AC	29⅝	48⅝	31⅞	61,000	7.4	125	455	7.7	3	4,200	Side	Tecumseh	5	PFB500
*90AC	36	42½	53⅛	85,000	9.6	145	600	13.1	3	4,800	Side	Copeland	7½	MR50-761
Bonair—Peerless Products Co., 23rd & Sedgley Ave., Philadelphia 32, Pa.														
24AC	24	30	28	22,000†	...	...	205	3.6	2	1,750	Side	Tecumseh	2	B21U18
35AC	36	30	28	32,000†	...	...	265	4.1	3	1,900	Side	Tecumseh	3	JE300
47AC	29	49	32	45,000†	...	...	420	7.7	2	3,600	Side	Tecumseh	4	PFB400
60AC	29	49	32	56,000†	...	...	455	7.7	3	4,200	Side	Tecumseh	5	PFB500
85AC	34	66	33	82,000†	...	...	710	12.5	3	7,500	Side	Copeland	7½	MR50-761F
†Rated under ARI standard.														
Brown—A. Brown Products Corp., 1090 Springfield Rd., Union, N. J.														
*24AC-1	29⅝	30½	27⅞	22,000†	3.0	...	205	3.6	2	1,750	Side	Tecumseh	2	B21U18
*35AC-1, 3	36⅛	30½	27⅞	32,000†	4.5	...	265	4.1	3	1,900	Side	Tecumseh	3	JE300
*47AC-1, 3	29⅝	44⅝	31⅞	45,000†	6.1	...	445	7.7	3	3,600	Side	Tecumseh	4	PFB400
*60AC-1, 3	29⅝	48⅝	31⅞	56,000†	7.4	...	455	7.7	3	4,200	Side	Tecumseh	5	PFB500
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†Rated under ARI standard.														
Bryant—Bryant Mfg. Co., 2020 Montcalm St., Indianapolis, Ind.														
*24-562	25¼	37	24⅜	24,000	2.9	50	225	5.25	2	...	Top	Bendix-W.	2.5	H490TA
*30-562	25¼	37	24⅜	30,000	4.2	78	275	...	...	...	Top	Tecumseh	3.0	JE300
*36-562	25½	37	24⅜	36,000	3.9	70/60	325	5.25	3	...	Top	Bryant-C.	4.0	6D28-B609
*48-562	28	44	26¼	48,000	4.9	100	390	7.0	3	...	Top	Bryant-C.	4.5	6D34-C129
*50-560	28	36⅝	45⅜	57,000	6.1	100/90	565	8.3	4	2,475	Side	Bryant-C.	5.0	6D44-A679
*60-560	27½	36⅝	47¼	65,000	7.2	120	560	9.7	4	3,900	Side	Bryant-C.	7.5	6D48-B289
*75-560	28⅝	73⅜	38⅜	76,000	7.6	120	937	13.0	2	5,600	Side	Bryant-C.	7.5	...
*26-450	53⅜	40⅝	48	36,000	...	...	1.044‡	...	...	4,500	Top	——Gas Absorption——		
*54-450	60⅞	46⅜	56	54,000	...	...	1.544‡	...	...	6,700	Top	——Gas Absorption——		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
‡Approximate shipping weight.														
Burnham—Burnham Corp., Warm Air & Cooling Div., Belle Vernon, Pa.														
RC-2	29⅝	30½	27⅞	22,000†	3.0	55	205	3.6	2	1,750	Side	Tecumseh	2	B21U18
RC-3(3)	29¼	30½	27⅞	32,000†	4.4	78/68	265	4.1	3	1,900	Side	Tecumseh	3	JE300
RC-4(3)	29⅝	48⅝	31⅞	45,000†	6.1	110/78	420	7.7	2	3,600	Side	Tecumseh	4	PFB400
RC-5(3)	29⅝	48⅝	31⅞	56,000†	7.4	125/90	455	7.7	3	4,200	Side	Tecumseh	5	PFB500
RC-7-3	34½	66	33¾	82,000†	9.6	145	710	12.5	3	7,500	Side	Copeland	7½	MR50-761F
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†Rated under ARI standard.														
Capitolaire—Crane Co., Miami, Okla.														
RA1-021	26	33	28	23,000†	2.9	...	210	5.0	2	2,200	Side	Tecumseh	2	B21U18
RA1-031-3	26	33	28	33,000†	3.9	...	245	5.0	3	3,200	Side	Tecumseh	3	JE300
RA1-041-3	30	46	28	49,000†	6.0	...	420	8.5	3	4,500	Side	Tecumseh	4	PFB400
RA1-051-3	30	46	28	59,000†	6.9	...	460	8.5	3	4,500	Side	Tecumseh	5	PFB500
†Rated under ARI standard 210-58.														
Century—Century Engineering Corp., 221 Fourth Ave. S.E., Cedar Rapids, Iowa														
*BB-1	23	23	23	12,000‡	...	37	150	2.22	3	1,200	...	Tecumseh	1	...
*VD-2	25⅝	28	25	19,500†	...	50	269	3.75	3	1,600	...	Tecumseh	1½	...
*BB-2	25⅝	28	25	24,000†	...	53.6	272	3.75	3	1,600	...	Tecumseh	2	...
*BB-2½	28⅝	31½	34	30,400†	...	70	310	3.75	3	1,600	...	Bendix-W	2½	...
*BB-3	28⅝	31½	34	36,000†	...	68	436	4.5	3	2,900	...	Tecumseh	3	...
*BB-4	35	49	37	48,000†	...	110	525	9.0	3	3,500	...	Tecumseh	4	...
*BB-5	35	49	37	60,000†	...	125	644	9.0	3	4,000	...	Tecumseh	5	...
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‡Evaporator air 80° db, 67° wb, 375 cfm per hp capacity, condenser air inlet temperature 85°. †Rated under ARI standard.														
Chattanooga—Chattanooga Royal Co., Chattanooga 6, Tenn.														
*24AC1	29⅝	30½	28	24,000†	...	...	...	...	...	...	Side	Tecumseh	2	...
*36AC1, 3	29⅝	30½	28	35,000†	...	...	...	...	...	...	Side	Tecumseh	3	...
*60AC1, 3	38⅝	48⅝	32	61,000†	...	...	...	...	...	...	Side	Tecumseh	5	...
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†Rated under ASRE standard.														
Climate Changer—The Trane Co., La Crosse, Wis.														
*RUA21, 3	25⅝	40⅝	30½	22,000†	...	9.91	400	5.55	1	1,800	Top	Tecumseh	2	...
*RUA31, 3	31½	40⅝	30½	33,000†	...	14.42	480	7.02	1	2,700	Top	Tecumseh	3	...
*RUA41, 3, 4	31½	47¼	31½	48,000†	...	34.7‡	630	9.18	1	3,780	Top	Tecumseh	4	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
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*RUA51, 3, 4	36	53⅛	37¼	57,000†	...	35.8‡	710	11.00	1	5,130	Top	Tec./Trane	5	...
*RUA72, 4	44⅜	53⅛	33¼	76,000†	...	27.0‡	950	15.41	1	5,600	Top	Cop./Trane	7½	...
†Rated under ARI standard. ‡For 208/230 volt, 3-phase compressors.														
Clima-Twin—Round Oak Co., Inc. of Indiana, Dowagiac, Mich.														
RA-260-1	29¼	29¼	42	21,500†	2.5	48	280	4.35	2	2,200	Top	Bendix-W.	2	CH-490
RA-373-1	31½	37¼	37½	36,000†	4.1	78	370	7.5	3	2,800	Top	Tecumseh	3	PJE300
RA-373-3	31½	37¼	37½	36,000†	4.1	75	370	7.5	3	2,800	Top	Tecumseh	3	PJE300
RA-474-1	31½	37¼	37½	48,000†	5.6	50‡	440	7.5	3	3,600	Top	Bendix-W. (2)	3	CH-980
RA-504-1	31½	37¼	37½	60,000†	7.1	127	520	11.3	3	4,200	Top	Tecumseh	5	PFB500
RA-504-3	31½	37¼	37½	60,000†	7.1	109	520	11.3	3	4,200	Top	Tecumseh	5	PFB500
RA-260-1	29¼	29¼	42	24,000†	4.3	78	340	4.35	4	2,400	Top	Tecumseh	3	PJE300
RA-461-1	31½	47	33½	47,000†	...	115	480	8.85	3	3,900	Top§	Bendix-W.	4	YH1030
RA-561-1	31½	47	33½	58,000†	...	139	500	8.85	3	4,500	Top§	Copeland	5	4UB1-502
†Rated under ARI standard 210-58. ‡Each. §Or side.														
Clima-Twin-Aire—Peerless Corp., 1853 Ludlow Ave., Indianapolis 7, Ind.														
RA-260-1	29¼	29¼	42	21,500†	2.5	48	280	4.35	2	2,200	Top	Bendix-W.	2	CH-490
RA-373-1	31½	37¼	37½	36,000†	4.1	78	370	7.5	3	2,800	Top	Tecumseh	3	PJE300
RA-373-3	31½	37¼	37½	36,000†	4.1	75	370	7.5	3	2,800	Top	Tecumseh	3	PJE300
RA-474-1	31½	37¼	37½	48,000†	5.6	50‡	440	7.5	3	3,600	Top	Bendix-W. (2)	3	CH-980
RA-504-1	31½	37¼	37½	60,000†	7.1	127	520	11.3	3	4,200	Top	Tecumseh	5	PFB500
RA-504-3	31½	37¼	37½	60,000†	7.1	109	520	11.3	3	4,200	Top	Tecumseh	5	PFB500
RA-260-1	29¼	29¼	42	24,000†	4.3	78	340	4.35	4	2,400	Top	Tecumseh	3	PJE300
RA-461-1	31½	47	33½	47,000†	...	115	480	8.85	3	3,900	Top§	Bendix-W.	4	YH1030
RA-561-1	31½	47	33½	58,000†	...	139	500	8.85	3	4,500	Top§	Copeland	5	4UB1-502
†Rated under ARI standard 210-58. ‡Each. §Or side.														
Columbia—Columbia Specialty Co., Inc., Box 347, R.F.D. #3, Gaithersburg, Md.														
*2CU	20	30	48	24,000	...	43.6/ 56‡	380	...	...	1,600	Side	Tecumseh	2	JE300
*3CU	25	28	48	36,000	...	75.0/ 78‡	450	...	...	2,400	Side	Tecumseh	3	PJE300
*5CU	50	36	52	60,000	...	109/127‡	700	...	...	4,000	Side	Tecumseh	5	PFB500
*4CU	50	36	52	48,000	...	78/110‡	700	...	...	3,200	Side	Tecumseh	4	PFB400
‡First figure three phase, second figure single phase.														
Comfort-Aire—Heat Controller, Inc., 1900 Wellworth Ave., Jackson, Mich.														
*HCA-341	23⅝	30½	27⅞	23,000†	3.0	60.5	205	3.6	2	1,750	Side	Tecumseh	2	B21U18
*HCA-361(3)	28¼	30½	27⅞	33,000†	4.4	83.5	265	4.1	3	1,900	Side	Tecumseh	3	JE300
*HCA-481(3)	28⅝	48⅝	31⅞	45,000†	6.1	121.0	420	7.7	3	3,600	Side	Tecumseh	4	PFB400
*HCA-611(3)	28⅝	48⅝	31⅞	56,000†	7.4	139.2	455	7.7	3	4,200	Side	Tecumseh	5	PFB500
*HCA-859	34⅛	66	33⅝	83,000†	9.6	159.6	710	12.5	3	7,500	Side	Copeland	7½	MR50-761F
HCA-913(4)	50¼	101	40	84,000†	9.6	145	1185	15.1	3	7,200	Top	Copeland	7½	MR50-760
HCA-1308(4)	50¼	101	40	113,000†	11.8	180	1270	21.5	3	10,000	Top	Copeland	10	9R5-1000
HCA-1808(4)	50¼	114	40	180,000	20.2	250	1435	21.2	3	15,000	Top	Copeland	15	4R45-2006
HCA-2408(4)	50¼	114	40	210,000	20.4	250	1510	21.2	4	14,500	Top	Copeland	20	4R45-2006
†Rated under ARI standard.														
Continental—International Metal Products Div., McGraw-Edison Co., 500 South 15th St., Phoenix, Ariz.														
R3-1, 3	29½	32	28	36,800	5.7/4.6	...	330	4.7	4	3,800	Side	Tecumseh	3	PJE300
R4-1, 3	29½	36	31	49,500	7.9/7.1	...	430	4.6	6	4,300	Side	Tecumseh	4	PFB400
R5-1, 3	32	45	34	59,300	9.0/7.9	...	530	7.0	6	5,000	Side	Tecumseh	5	PFB500
R7½-3	48	34½	53⅝	85,800	8.2	...	745	9.2	6	8,960	Side	Copeland	7½	MR50-760
R10-3	36	40½	60¼	112,000	10.8	...	945	14.0	6	11,000	Side	Copeland	10	9R5-1000
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Split Systems—Evaporator, Blower-Evaporator Units

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacity (Btuh)	Refrigerant Control	Net Weight	Coil Face Area (Sq Ft)	Coil Rows Deep	Blower Cfm	Blower Rpm	Motor Hp	Air Filter Dimensions (In.)
HA37	22¼	22½	24	36,000	X-Valve	130	2.0	4	1,350	750	¼	20x25
HA50	23¼	34½	24	50,000	X-Valve	155	3.75	4	1,800	900	½	(2) 14x25
HA68	27½	42¾	33	68,000	X-Valve	245	4.50	4	2,000	950	¼	(2) 20x25
HA98	30¼	54	34	98,000	X-Valve	425	7.0	4	3,000	950	¾	(3) 14x25
HA122	34½	60	36	122,000	X-Valve	515	8.75	4	4,000	950	1	(4) 16x25
VA37	46	23½	23	36,000	X-Valve	155	3.0	4	1,350	750	½	20x25
VA50	46	23½	23	50,000	X-Valve	215	3.75	4	1,600	950	½	(2) 14x25
VA68	59	29	24	68,000	X-Valve	220	4.50	4	2,000	950	¼	(2) 20x25
VA98	60	54	26	98,000	X-Valve	500	7.0	4	3,000	950	¾	(3) 14x25
VA122	64	60	30	122,000	X-Valve	580	8.75	4	4,000	950	1	(4) 16x25
FCF-42-36	20	23	26¾	42,000	None	168	2.8	6	1,400	...	¼	(2) 16x30x1
FCF-42-36V	64	33	20½	42,000	None	250	2.8	6	1,400	...	½	(3) 16x30x1
42-R3-3	14	12	18½	21,000	X-Valve	44	2.67	3	750	...	...	...
42-R3-3	16⅝	20½	18½	35,000	X-Valve	56	3.41	3	1,200	...	...	...
(D) 42-R7-3	15⅛	26¼	28¼	35,000	X-Valve	95	3.66	3	1,200	...	...	...
(H) 42-R3-3	22¼	28⅝	30½	35,000	X-Valve	64	3.66	3	1,200	...	...	...
(H) 42-R3-3	23¼	28⅝	31	35,000	X-Valve	149	3.66	3	1,200	...	4/10	20x25x1
42-R3-5	24¼	28⅝	27½	58,000	X-Valve	110	7.34	3	2,000	...	...	...
(H) 42-R3-5	23¼	40⅝	30½	60,000	X-Valve	92	5.5	3	2,000	...	...	...
(H) 42-R3-5	23¼	40⅝	40	60,000	X-Valve	198	5.5	3	2,000	...	(2) 4/10	(2) 20x30x1
BC2	19	22½	26½	24,000	X-Valve	150	3.1	3	800	...	¼	25x17
BC3	19	22½	33½	36,000	X-Valve	170	3.1	3	1,200	...	½	25x17
BC4	27¾	30¼	36¼	48,000	X-Valve	210	5.0	3	1,600	...	½‡	30x24
BC5	27¾	30¼	36¼	60,000	X-Valve	235	5.0	3	2,000	...	¾	30x24
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‡Also two-speed.												
3D19	16¼	21⅜	23¾	24,000	X-Valve	77	2.72	3	800	...	...	...
3D22	16¼	34⅜	24¾	36,000	X-Valve	77	2.72	3	1,200	...	...	...
5D24	19	27	31	61,000	X-Valve	95	5.00	3	2,000	...	...	...
7D27	21	39½	32⅝	86,000	X-Valve	112	5.60	3	3,000	...	...	...
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24AC-A	14	19	22	22,000	Cap./X-V	90	2.2	3	800	900	¼	...
35AC-A	18	22	22	32,000	Cap./X-V	40	3.1	3	1,200	900	¼	...
47AC-A	23	28⅝	22	45,000	Cap./X-V	60	6.0	3	1,600	685	½	...
60AC-A	23	28⅝	22	56,000	Cap./X-V	60	6.0	3	1,900	770	½	...
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Also available in horizontal flow.												
20VB	23¼	23¼	23¼	22,000	X Valve	136	...	...	450/ton	...	¼	...
24-504	17¾	16¾	18⅛	24,000	X Valve	...	...	...	450/ton	...	...	...
30-504	17¾	20¾	18⅛	30,000	X Valve	...	...	...	450/ton	...	...	...
30VB	23¼	23¼	23¼	34,000	X Valve	143	...	...	450/ton	...	½	...
36-504	17¾	24¾	18⅛	36,000	X Valve	...	...	...	450/ton	...	...	...
40VB	28¼	28¼	28¼	36,000	X Valve	195	...	...	450/ton	...	½	...
48-504	17¾	28¾	18⅛	48,000	X Valve	...	...	...	450/ton	...	...	...
50VB	28¼	28¼	28¼	54,000	X Valve	198	...	...	450/ton	...	½	...
60VB	28¼	34¾	28¼	65,000	X Valve	250	...	...	450/ton	...	½	...
60-504	17¾	34¾	18⅛	65,000	X Valve	...	...	...	450/ton	...	...	...
75VB	29¾	54¾	27¾	76,000	X Valve	280	...	...	450/ton	...	½	(4) 14x25x1
504 models also available downflow. Horizontal coils also available in 30, 40, 50, 75 models.												
A-24	14	18⅝	22	22,000	Cap.	42	2.2	3	800	...	...	...
A-35	18	23⅛	22	32,000	Cap.	50	3.1	3	1,200	...	...	...
A-48	23	28⅝	22	45,000	Cap.	95	6.0	3	1,600	...	...	...
A-61	23	28⅝	22	56,000	Cap.	95	6.0	3	1,900	...	...	...
EB-91	25	53⅞	41	84,000	X-Valve	265	7.2	3	3,000	700	¾	(3) 16x20x1
EB-121	25	64⅞	41	108,000	X-Valve	510	8.9	4	4,000	780	1	(3) 20x20x1
EB-181	32¾	78	54	180,000	X-Valve	625	14.6	4	6,000	675	1 1/7	(4) 16x25x1, (3) 16x20x1
EB-241	32¾	78	54	210,000	X-Valve	695	14.6	6	7,200	720	2	(4) 16x25x1, (3) 16x20x1
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¶Or expansion valve.												
*24AC1-A, C	14	18⅝	22	...	Cap.	267†	...	...	...	...	...	...
*24AC1-H	13¼	26⅝	10	...	Cap.	264†	...	...	...	...	...	...
*36AC1, 3-A, C	18	22¼	22	...	Cap.	357†	...	...	...	...	...	...
*36AC1, 3-H	18⅛	26⅝	10	...	Cap.	339†	...	...	...	...	...	...
*60AC1, 3-A, C	23	28⅝	22	...	Cap.	417†	...	...	...	...	...	...
*60AC1, 3-H	18⅝	40½	10	...	Cap.

Split Systems—Condensing Units

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Nominal Rating (Btuh)	Kw Input Tons†	Locked Rotor Amps	Net Weight	Condenser Face Area (Sq Ft)	Rows Deep	Cfm	Air Discharge	Compressor Make	Hp	Comp. Mfrs. Model No.
Coolerator—Albion Div., McGraw-Edison Co., 704 N. Clark St., Albion, Mich.														
*R3C21	26⅝	21⅛	28¼	34,000†	3.1	83.4	...	4.0	4	2,000	Side	Tecumseh	2	B21U18
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*R3A21	30⅝	31⅛	28¼	34,000†	4.08	80.4	...	4.0	4	2,000	Side	Tecumseh	3	JE300
*R3A23	30⅝	31⅛	28½	34,000†	...	90.4	...	4.0	4	2,000	Side	Tecumseh	3	JE300
*R4A21	43¼	34	34	47,000†	5.58	113.5	...	6.25	3	2,400	Top	Tecumseh	4	PFB400
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*R5A21	43¼	38⅛	28½	56,000†	6.86	128.6	...	7.75	3	2,900	Top	Tecumseh	5	FB500
*R5A23	43¼	38⅛	38½	56,000†	...	93.6	...	7.75	3	2,900	Top	Tecumseh	5	FB500
†Rated under ARI standard 210-58.														
Cool-ette, Liquid-Ice, Ranch-Air—Cool-ette, Inc., 7535 West Eight Mile Rd., Detroit 21, Mich.														
*RP300	33¼	30	30	22,500	2.6	...	264	4.26	2	...	Top	Tecumseh	3	JE200
*RA300	34	35	44	22,500	2.6	...	410	4.26	2	...	...	Tecumseh	3	JE200
*RP300	33¼	30	30	35,300	3.7	...	292	6.29	2	...	Top	Tecumseh	3	JE300
*RA300	34	35	44	35,300	3.7	...	419	6.29	2	...	...	Tecumseh	3	JE300
*RP500	35	36	36	59,100	6.5	...	454	8.95	3	...	Top	Tecumseh	5	FB500
*RA500	35	41½	53	60,000	6.5	...	620	8.95	3	...	...	Tecumseh	5	FB500
Corsaire, Rheemaire—Rheem Mfg. Co., 7600 S. Kedzie, Chicago 52, Ill.														
AC-22B1	27½	26⅝	31⅝	22,000†	2.9	58.7	222	3.0	2	2,200	Side	Tecumseh	2	B21U18
AC-34B1	27½	26⅝	31⅝	34,000†	4.3	82.0	300	4.65	3	2,350	Side	Tecumseh	3	PJE300
AC-34B3	27½	26⅝	31⅝	34,000†	4.23	79.2	295	4.65	3	2,350	Side	Tecumseh	3	PJE300
AC-37B1	27½	26⅝	31⅝	37,000†	4.8	82.0	310	4.65	4	2,250	Side	Tecumseh	3	PJE300
AC-37B3	27½	26⅝	31⅝	37,000†	4.5	79.2	305	4.65	4	2,250	Side	Tecumseh	3	PJE300
AC-46B1	27½	45⅝	31⅝	46,000†	5.92	117.3	450	7.2	2	3,900	Side	Tecumseh	4	PFB403
AC-46B3	27½	45⅝	31⅝	46,000†	5.82	83.3	445	7.2	2	3,900	Side	Tecumseh	4	PFB403
AC-57B1	27½	45⅝	31⅝	57,000†	7.5	134.3	465	7.2	3	3,850	Side	Tecumseh	5	PFB500
AC-57B3	27½	45⅝	31⅝	57,000†	7.35	116.3	460	7.2	3	3,850	Side	Tecumseh	5	PFB500
RC-22B1	23⅝	18¼	49¼	22,000†	2.18	38.4	268	2.0	1	900	Side	Copeland	1	UWS-100
RC-30B1	23⅝	18¼	49¼	29,000†	2.82	48.2	283	2.0	1	900	Side	Tecumseh	2	B21U18
RC-40B1	23⅝	18¼	49¼	40,000†	3.59	60.2	328	2.0	2	900	Side	Tecumseh	2	JE300
RC-40B2	23⅝	18¼	49¼	40,000†	3.5	60.2	326	2.0	2	900	Side	Tecumseh	2	JE200
RC-57B1	31¼	23⅝	52	57,000†	5.61	88.0	502	3.8	1	1,700	Side	Copeland	3	3R42-302
RC-57B3	31¼	23⅝	52	56,000†	5.5	78.0	496	3.8	1	1,700	Side	Copeland	3	3R42-302
LRA-75B1	35½	29⅝	62	75,000†	7.65	137.0	633	5.4	1	2,000	Side	Tecumseh	4	PFB400
LRA-75B3	35½	29⅝	62	75,000†	7.53	105.0	630	5.4	1	2,000	Side	Tecumseh	4	PFB400
RA-110B1	35½	29⅝	62	108,000†	10.7	188.0	750	5.4	2	2,000	Side	Copeland	(2) 4	4U26-402
RA-110B3	35½	29⅝	62	108,000†	10.6	159.0	745	5.4	2	2,000	Side	Copeland	(2) 4	4U26-402
†Rated under ARI standard.														
Curtis—Curtis Mfg. Co., 1903 Kienlen Ave., St. Louis 33, Mo.														
AU400	29⅝	29	36⅝	34,000†	3.9	70	375	4.75	4	2,440	Side	Copeland	3	ERF1-0810TAC
AU600	29⅝	34⅛	44⅛	57,000†	6.5	131	470	9.50	4	3,870	Side	Copeland	5	NRA3-0500TFC
AU800	37⅞	34⅛	51⅞	79,000†	8.37	145	670	14.3	4	6,000	Side	Copeland	7½	MRH1-0760TFC
AU1200	41¼	42	45⅝	111,000	11.53	180	985	13.35	4	8,550	Side	Copeland	10	9R8-1000
†Rated under ARI standard 210-58.														
Day & Night—Day & Night Mfg. Co., 855 Anaheim-Puente Rd., La Puente, Calif.														
240AR-186	21⅝	24	30⅝	24,000	3.2	55.0	195	3.66	3	1,200	Side	Tecumseh	2	B21U18
30DNR-104T	26⅝	44⅛	16⅞	30,000	3.9	73.5	220	5.53	3	1,700	Top	Tecumseh	2½	CL35
360AR-1, 356	22⅝	24	36⅛	35,000	4.7	73/75	240	5.53	4	1,800	Side	Tecumseh	3	PJE300
480AR-1, 356	29	29¼	40⅝	48,000	5.25	110/79	286	6.98	4	2,400	Side	Tecumseh	4	PFB400
60DNR-1, 304T	29	65	25	59,000	6.90	127/105	525	7.10	4	3,400	Top	Tecumseh	5	PFB503
ACR8R-229	26⅝	73⅝	33⅝	76,000	8.79	120	900	12.07	3	5,000	Side	Carrier	7½	6D63
96AR-3	44⅝	89¼	44⅝	96,000	10.2	120	800	15.5	2	10,000	Top	Brunner	7½	7HF
120AR-3	44⅝	100⅝	55⅛	118,000	13.6	138	1100	23.8	2	15,000	Top	Brunner	10	10DHF
Delco Conditionair—Delco Appliance Div., General Motors Corp., P. O. Box 230, Rochester 1, N. Y.														
*DC21E	23⅝	30¼	27⅞	22,000†	3.0	60.8	205	3.6	2	1,750	Side	Tecumseh	2	B21U18
*DC31E	26⅝	30¼	27⅞	32,000†	4.4	82.8	265	4.1	3	1,900	Side	Tecumseh	3	JE300
*DC33E	26⅝	30¼	27⅞	32,000†	4.4	73.8	265	4.1	3	1,900	Side	Tecumseh	3	JE300
*DC41E	28⅝	48⅝	31⅞	45,000†	6.1	121.6	420	7.7	2	3,600	Side	Tecumseh	4	PFB400
*DC43E	28⅝	48⅝	31⅞	45,000†	6.1	89.6	420	7.7	2	3,600	Side	Tecumseh	4	PFB400
*DC51E	28⅝	48⅝	31⅞	56,000†	7.4	135.2	455	7.7	3	4,200	Side	Tecumseh	5	FB500
*DC53E	28⅝	48⅝	31⅞	56,000†	7.4	100.2	455	7.7	3	4,200	Side	Tecumseh	5	FB500
†Rated under ARI Standard.														
Dowagiac—Dowagiac Steel Furnace Co., 109 Beeson St., Dowagiac, Mich.														
*24AC-A	23⅝	30⅛	27⅞	22,000†	3.0	60.5	205	3.6	2	1,750	Side	Tecumseh	2	B21U18
*35AC-A	26⅝	30⅛	27⅞	32,000†	4.4	82.5	265	4.1	3	1,900	Side	Tecumseh	3	JE300
*47AC-A	31⅝	48⅝	31⅞	45,000†	6.1	121.0	420	7.7	3	3,600	Side	Tecumseh	4	PFB400
*60AC-A	28⅝	48⅝	31⅞	56,000†	7.4	139.2	455	7.7	3	4,200	Side	Tecumseh	5	FB500
†Rated under ARI standard.														
Floatingair—Friedrich Refrigerators, Inc., 1117 East Commerce St., San Antonio, Texas														
*DRAU-301	19⅝	27½	35½	34,000†	2.64	56	270	5.73	2	3,100	Side	Tecumseh	2	JR200
*ADRAU-301	19⅝	27½	35½	37,000†	3.7	78	285	5.73	3	2,900	Side	Tecumseh	3	PJE300
*ADRAU-401.3	25¼	27⅝	36	47,000†	4.9	110/ 78	400	9.6	3	3,500	Side	Tecumseh	4	PFB400
*ADRAU-501, 3	25¼	27⅝	36	59,000†	6.8	127/109	400	9.6	3	3,500	Side	Tecumseh	5	PFB500
*DRAU-753	54⅝	49⅝	34⅝	84,000†	7.8	145	800	14.95	3	7,000	Side	Copeland	7½	MR50-761-F
DRAU-1003	54	49⅝	34⅝	111,000	10.5	180	900	14.95	4	8,000	Side	Copeland	10	9R8-1000
DRAU-1503	54	69⅝	34⅝	140,000	14.9	214	900	14.95	5	9,000	Side	Brunner	15	150PHF
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†Rated under ARI standard 210-58.														
Forston & Lincoln—The Forston Co., 2117-19 Judiway St., Houston 18, Texas														
*RC-200	25⅛	29¼	35⅛	23,500	2.33	55/...	350	4.0	3	2,000	Side	Tec./B-W	2	B21U18†
200R-C	25⅛	29¼	35⅛	24,600	2.40	55/...	375	4.0	3	2,000	Side	Tecumseh	2	JR200
*RC-300	25⅛	29¼	35⅛	31,000	3.30	78/75	400	4.0	3	2,800	Side	Tecumseh	3	JE300
300R-C	25⅛	29½	35½	37,100	3.82	78/75	450	4.0	4	2,800	Side	Tecumseh	3	PJE300
*RC-400	34½	34	37	49,000	4.90	110/78	550	6.2	3	3,500	Side	Tecumseh	4	PFB400
400R-C	34½	34	37	58,200	4.50	110/78	575	6.2	4	3,500	Side	Tecumseh	4	PFB400
*RC-500	34½	34	37	62,600	6.90	127/109	600	6.2	4	3,500	Side	Tecumseh	5	FB500
500R-C	41⅛	41⅛	40	63,800	6.60	127/109	625	9.0	3	5,400	Side	Tecumseh	5	FB500
750R-C	41⅛	41⅛	40	83,700	7.95	126/75	725	9.0	4	6,100	Side	Copeland	7½	MRG-751
1000R-C	55	53½	40⅝	116,800	10.14	180/93	835	16.0	3	8,800	Side	Copeland	10	9R8-1000
1500R-C	42	81	54½	185,000	18.65	186/98	1495	19.0	4	12,200	Side	Copeland	20	4R48-2001
2000R-C	82	82	54½	232,000	22.01	250/125	1900	23.39	4	13,800	Side	Copeland	20	4R48-2001
2000R-C	60	125	51	232,000	24.42	292/196	2800	41.66	4	17,600	Side	Copeland	30	6R48-3006
*These models specially designed for residential use; however, any of above models are so designed that they could be used for residential use. ‡Or Bendix-Westinghouse H490TA.														
Gaffers & Sattler—Utility Appliance Corp., 8111 W. Beverly Blvd., Los Angeles 48, Calif.														
2TCL-1	23½	28½	28½	24,000	2.7	43	225	5.3	3	2,500	Top	Tecumseh	2	...
2TCLE	57	28½	28½	26,000	2.7	43	351	5.3	3	2,300	Side	Tecumseh	2	...
3TCL-1, 3	23½	28½	28½	36,000	3.6/4.1	66	260	5.3	4	2,500	Top	Tecumseh	3	...
3TCLE	57	28½	28½	30,000	4.1	66	351	5.3	4	2,300	Side	Tecumseh	3	...
3TH-1	37	34	38	36,000	4.1	66	440	6.0	4	3,000	Side	Tecumseh	3	...
4TC	43⅝	34½	34½	48,000	5.4	110	490	9.2	3	3,800	Top	Tecumseh	4	...
4T-1, 3	30	42	48	48,000	5.4	110	638	9.2	3	3,800	Side	Tecumseh	4	...
5TH-1, 3	30	42	48	60,000	6.6	127	643	9.2	4	4,400	Side	Tecumseh	5	...
General Electric—General Electric Co., Troup Hwy., Tyler, Texas														
*TA25F	25¼	31⅝	28	24,000†	2.96	64.5/...‡	220	4.8	2	1,680	Side	G-E	2.5	...
*TA33F	25¼	31⅝	28	30,000†	3.80	88/621	240	4.1	3	2,040	Side	G-E	3	...
*TA40F	25¼	31⅝	28	36,000†	5.15	105/912	255	4.8	3	2,425	Side	G-E	4	...
*TA53B	27½	70⅝	27½	48,000†	6.10	135.5/109.5‡	440	7.0	4	3,200	Side	G-E	5	...
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*TA63B	27½	70¼	27½	58,000†	7.40	170.5/133.5‡	470	8.3	4	4,000	Side	G-E	6	...
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*TA75B	27½	70¼	27½	72,000†	10.42	.../175.5‡	485	8.3	4	5,100	Side	G-E	7	...
TA96A	51	70	27½	96,000†	...	.../195‡	740	14.7	3	7,000	Top	G-E	10	...
TA120A	51	70	27½	120,000	...	.../260‡	880	18.7	4	8,000	Top	G-E	12	...
†Rated under ARI standard 210-58. ‡Single-phase/three-phase.														
Gordon—Roberts-Gordon Appliance Corp., 44 Central Ave., Buffalo 6, N. Y.														
24AC	23⅝	30½	27⅞	24,000	2.98	...	205	2.25	2	1,750	Side	Tecumseh	2	B21U18
35AC	23⅝	30½	27⅞	35,000	4.5	...	265	2.25	3	1,900	Side	Tecumseh	3	JE300
47AC	28⅝	48⅝	31⅞	48,000	6.08	...	445	7.7	2	3,600	Side	Tecumseh	4	PFB400
60AC	28⅝	48⅝	31⅞	61,000	7.36	...	455	7.7	3	4,200	Side	Tecumseh	5	FB500
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Green Colonial—Green Colonial, Inc., 322 S.W. Third St., Des Moines, Iowa														
RAR31	53½	25	25	24,000	...	...	...	...	...	...	...	...	2	...
RAR31-C	35⅝	31	31	36,000	...	...	...	...	...	...	...	...	3	...
RAR51, 3-C	45	37	37	60,000	...	...	...	...	...	...	...	...	5	...
Heatwave—Southwest Mfg. Co., P. O. Box 151, Aurora, Mo.														
*EK-221	23	45	25	24,000	2.5	78	240	5.5	2	1,800	Top	Tecumseh	2	B21U18
*EK-331, 3	29	45	25	36,000	3.7	93/75	260	5.5	3	2,400	Top	Tecumseh	3	PJE300
*EK-431, 3	29	48	32	47,000	4.9	126/98	335	10.5	2	3,600	Top	Copeland	4	4U26-402, 1
*EK-521, 3	29	48	32	60,000	6.2	139/105	400	10.5	3	3,900	Top	Copeland	5	4U31-502, 1
EK-752	34	48	37	97,000	9.4	145	650	14.5	3	5,300	Top	Copeland	7½	MR50-760
AK-1003	32	74	32	113,000	12.4	180	800	22.0	2	7,800	Top	Copeland	10	9R8-1000
Heil—Heil-Quaker Corp., 647 Thompson Lane, Nashville 4, Tenn.														
*A32CUSA-1	23⅝	30½	27⅞	22,000†	3.0	55	295	3.6	2	1,750	End	Tecumseh	1¾	B21U18
*A32CUSA-1, 3	26⅝	30½	27⅞	32,000†	4.4	78	265	4.1	3	1,900	End	Tecumseh	3	JE300
*A45CUSA-1, 3	28⅝	48⅝	31⅞	45,000†	6.1	78	420	7.7	2	3,600	End	Tecumseh	4	PFB400
*A56CUSA-1, 3	28⅝	48⅝	31⅞	56,000†	7.4	90	455	7.7	3	4,200	End	Tecumseh	5	FB500
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†Rated under ARI standard.														
Holly——Holly General Div. of Siegler Corp., 875 So. Arroyo Pkwy., Pasadena, Calif.														
*AR4-23	28½	48½	18½	23,000†	2.7	52.4	250	5.0	3	2,000	Front	Tecumseh	2	B21U18
*AR4-34	28½	48½	18½	36,000†	3.8	78	275	5.0	4	3,000	Front	Tecumseh	3	JE300
*AR4-43	28½	71½	18½	40,000†	4.9	78	280	5.0	3	3,500	Front	Tecumseh	3	PJE300
*AR4-48	28½	71½	18½	48,000†	5.1	110	350	8.25	3	4,000	Front	Tecumseh	4	FB400
*AR4-60	28½	71½	18½	60,000†	6.4	125	350	8.25	4	5,000	Front	Tecumseh	5	FB500
†Rated under ARI standard 210-58.														

Split Systems—Evaporator, Blower-Evaporator Units

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacity (Btuh)	Refrigerant Control	Net Weight	Coil Face Area (Sq Ft)	Coil Rows Deep	Blower Cfm	Blower Rpm	Blower Motor Hp	Air Filter Dimensions (In.)
RUE3C	13⅞	19⅝	23½	24,000	X-Valve	...	3.0	3	800	...	...	...
RBE3C	23¼	25¼	26½	24,000	X-Valve	...	2.4	3	800	Adj.	¼	...
RUE3A	13	19⅝	23½	34,000	X-Valve	...	3.0	4	1,200	...	...	...
RBE3A	23¼	25¼	26½	35,000	X-Valve	...	2.4	3	1,200	Adj.	¼	...
RUE4A	13⅝	23⅝	26½	47,000	X-Valve	...	4.1	4	1,600	...	...	...
RBE4A	25½	25½	32¼	47,000	X-Valve	...	4.2	3	1,600	Adj.	½	...
RUE5A	13¼	31¼	33	56,000	X-Valve	...	5.5	3	2,000	...	...	...
RBE5A	25½	25½	32¼	56,000	X-Valve	...	4.2	3	2,000	Adj.	½	...
Cool-ette, Liquid-Ice, Ranch-Air—Cool-ette, Inc., 7535 West Eight Mile Rd., Detroit 21, Mich.												
200U	14	20	23½	22,500	X Valve	62	2.33	4	...	...	...	...
200BEC	18½	23⅝	34½‡	22,500	X Valve	136	2.33	4	800	...	¼	10x20x2
300U	14	20	23½	35,300	X Valve	70	2.92	4	...	...	...	...
300BEC	18½	23⅝	34½‡	35,300	X Valve	136	2.92	4	1,200	...	¼	10x20x2
500U	14⅝	29	29	59,100	X Valve	185	4.2	4	...	...	...	...
500BEC	20⅛	23⅝	40⅝‡	59,100	X Valve	250	4.2	4	2,000	...	½	10x25x2
‡Basic unit, filter and/or plenum extra.												
Corsaire, Rheemaire—Rheem Mfg. Co., 7600 S. Kedzie, Chicago 52, Ill.												
AC-22CDU§	17	14¼	31⅝	22,000	Cap.	...	3.31	2	800	...	...	...
AC-34AV§	55	25⅛	27½	34,000	Cap.	210	3.31	3	1,200	580	¼	(2) 19x27
AC-37AV§	55	25⅛	27½	37,000	Cap.	210	3.76	3	1,350	620	¼	(2) 19x27
AC-46AV§	55	25⅛	27½	46,000	Cap.	210	4.22	3	1,600	740	½	(2) 19x27
AC-57AV§	55	25⅛	27½	57,000	Cap.	210	4.23	3	2,000	865	½	(2) 19x27
RA22CDU§	17	14⅛	31⅝	22,000	Cap.	88	3.3	2	800	...	...	...
(H) RA30AH	19	24	28	28,000	Cap.	130	2.9	4	1,100	940	¼	19x27
RA40AV§	55	25⅛	27½	39,000	Cap.	210	3.8	4	1,200	980	¼	(2) 19x27
RE57AV§	55	25⅛	27½	56,000	Cap.	210	4.3	3	2,000	885	½	(2) 19x27
(H) LRA75CH	22	53	38½	74,000	Cap.	300	5.7	4	2,800	920	¾	(2) 22x22
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§Also available with blower for horizontal flow and without blower for plenum application either horizontal or vertical flow.												
Curtis—Curtis Mfg. Co., 1903 Kienlen Ave., St. Louis 33, Mo.												
BC-36	19	22	34	36,000	X-Valve	185	2.4	4	1,300	925	½	19¾x30x1
BC-60	23⅝	40	37	60,000	X-Valve	210	4.0	4	2,000	650	½	17½x36x1
BC-90	25¼	50	41	90,000	X-Valve	350	6.0	4	3,000	546	¾	20x25x1, 20x20x1
BC-120	23⅝	73	37	120,000	X-Valve	425	8.0	4	4,000	650	1	(2) 17½x36x1
Day & Night—Day & Night Mfg. Co., 855 Anaheim-Puente Rd., La Puente, Calif.												
24VC-2	18½	16¼	18⅝	23,000	X-Valve	64	2.19	3	850	...	...	...
30VC-2	18½	20¼	18⅝	32,000	X-Valve	66	2.93	3	1,060	...	...	...
36VC-2	18½	24¼	18⅝	36,000	X-Valve	72	3.65	3	1,275	...	...	...
48VC-2	18½	28¼	18⅝	48,000	X-Valve	99	4.38	3	1,800	...	...	...
60VC-2	18½	37⅝	18⅝	62,000	X-Valve	119	5.83	3	2,000	...	...	...
ACR8R-H	29⅝	34⅝	11⅛	76,000	X-Valve	135	8.63	2	2,650	...	...	...
(2) 4SDNH	43⅝	23	28½	96,000	(2) X-Valve	...	8.76	3	3,600	...	...	...
(2) 6SDNH	43⅝	23	28½	120,000	(2) X-Valve	...	11.66	3	4,000	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...
Delco Conditionair—Delco Appliance Div., General Motors Corp., P. O. Box 230, Rochester 1, N. Y.												
AU22SD	14	18⅝	23	22,000	Cap.	42	2.2	3	800	...	...	...
AU32SD	19	22⅛	23	32,000	Cap.	50	3.1	3	1,300	...	...	...
AU45SD	23	28⅝	23	45-56,000	Cap.	95	6.0	3	1,900	...	...	...
CB2F	22	26⅛	29¼	22,000	Cap.	145	1.9	3	800†	900	¼	20x25
CB3F	22	26⅛	29¼	32,000	Cap.	150	2.8	3	1,200†	900	¼	20x25
CB45F	25	34⅛	33	45-56,000	Cap.	230	4.6	3	16-2,000†	685-770	½	(2) 16x22¼
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†At .3 in. S.P.												
Dowagiac—Dowagiac Steel Furnace Co., 109 Beeson St., Dowagiac, Mich.												
24A-A	14	18⅝	23	22,000	Cap.	42	2.2	3	800	...	...	...
35A-9	18	22⅛	23	32,000	Cap.	50	3.1	3	1,200	...	...	...
47A-A	23	28⅝	23	45,000	Cap.	95	6.0	3	1,600	...	...	...
60A-A	23	28⅝	23	56,000	Cap.	95	6.0	3	1,900	...	...	...
Floatingair—Friedrich Refrigerators, Inc., 1117 East Commerce St., San Antonio, Texas												
AREA-300	17	20	20¾	27-42,000	X-Valve	45	2.96	3	900-1,400	...	...	...

Split Systems—Condensing Units

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Nominal Rating (Btuh)	Kw Input Total	Locked Rotor Amps	Net Weight	Condenser Face Area (Sq Ft)	Rows Deep	Cfm	Air Discharge	Compressor Make	Hp	Comp. Mfrs. Model No.
Homart—Sears, Roebuck & Co., 925 S. Homan Ave., Chicago 7, Ill.														
*789.11021	23⅝	30⅛	27⅛	22,000†	3.0	611	205	3.6	2	1,750	Side	Tecumseh	2	B21U18
*789.110311	26⅛	30⅛	27⅛	32,000†	4.4	842	265	4.1	3	1,900	Side	Tecumseh	3	JE300
*789.11041	29⅝	48⅜	31⅝	45,000†	6.1	1212	420	7.7	2	3,600	Side	Tecumseh	4	PFB400
*789.110511	29⅝	48⅜	31⅝	56,000†	7.4	1392	455	7.7	3	4,200	Side	Tecumseh	5	FB500
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†Rate under ARI standard. ‡Including condenser fan.														
International of Utica—International Heater Co., 101 Park Ave., Utica 2, N. Y.														
S-3C	33	33	30	34,000†	2.83	55	270	3.34	3	2,100	Side	Tecumseh	3	B21T18
S-3C	33	33	30	36,000†	4.6	78	290	5.83	3	3,200	Side	Tecumseh	3	PJE300
S-4C	33½	38	36	48,000†	6.1	110	480	7.80	3	3,850	Side	Tecumseh	4	PFB400
S-5C	38½	38	36	62,000†	7.8	127	576	7.80	3	4,500	Side	Tecumseh	5	PFB500
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†Rated under ARI standard.														
Iron Fireman, Timken—Iron Fireman Mfg. Co., 3170 W. 106th St., Cleveland 11, Ohio														
*24AC-A	23⅝	30⅛	27⅞	22,000†	3.0	60.5	205	2.6	2	1,750	Side	Tecumseh	2	B21U18
*36AC-A	26⅛	30⅛	27⅞	32,000†	4.4	83.5	265	4.1	3	1,900	Side	Tecumseh	3	JE300
*47AC-A	26⅝	48⅜	31⅝	45,000†	6.1	121.0	420	7.7	2	3,600	Side	Tecumseh	4	PFB400
*60AC-A	26⅝	48⅜	31⅝	56,000†	7.4	139.2	455	7.7	3	4,200	Side	Tecumseh	5	FB500
†Rated under ARI standard.														
Janitrol—Janitrol Div., Midland-Ross Corp., 400 Dublin Ave., Columbus, Ohio														
52-02401	29½	27¼	26⅝	22,000	3.02	....	210	4.63	2	1,900	Top	Tecumseh	2	B21T18
52-02601	33½	34⅜	25⅝	34,000	4.10	....	292	6.56	3	2,400	Top	Tecumseh	3	PJE300
52-04801	36⅝	39⅝	35½	47,000	5.83	....	447	8.88	3	3,100	Top	Tecumseh	4	PFB400
52-06001	34⅝	48⅜	35½	59,000	7.19	....	508	11.05	3	4,750	Top	Tecumseh	5	PFB500
52-08403	40½	36	44½	80,000	9.60	....	610	15.8	3	5,500	Top	Copeland	7½	MR50-760
52-12003	38½	48⅜	71	107,000	11.78	....	961	22.1	3	8,200	Top	Copeland	10	9R3-1000
Jet-Cool—Jet-Heet, Inc., 152 So. Van Brunt St., Englewood, N. J.														
*JC3RCU	22	26¼	26¾	32,000	4.6	30.2‡	225	3.45	4	2,000	Top	Bendix-W.	3	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
‡Not locked rotor.														
Kauffman—Kauffman Air Conditioning Co., 4336 W. Pine Blvd., St. Louis 8, Mo.														
*30	62	31	21	35,600	....	....	490	8.0	3	2,400	....	Tecumseh	3	....
50	85	46	33	60,000	....	....	850	10.0	4	4,000	....	Tecumseh	5	....
75	95	48	36	90,000	....	....	1015	15.0	4	7,000	....	Copeland	7½	....
100	99	62	36	120,000	....	....	1240	....	....	....	....	Copeland	(2) 5	....
150	106	79	31	180,000	....	....	1800	....	....	....	....	Copeland	(2) 7½	....
Kramer Unicon Compressor—Kramer Trenton Co., Olden & Breunig Ave., Trenton 5, N. J.														
C3A	40	38	28	33,700†	3.6	....	....	....	....	....	....	....	3	....
C5UA	40	36	37	60,000†	6.3	....	....	....	....	....	....	....	5	....
C7½UA	40	36	39½	85,500†	7.1	....	....	....	....	....	....	....	7½	....
C10UA	40	36	32	116,200†	9.6	....	....	....	....	....	....	....	10	....
C15UA	‡	....	....	179,000	16.1	....	....	....	....	....	....	....	15	....
C20UA	‡	....	....	234,000	19.1	....	....	....	....	....	....	....	20	....
C24UA	‡	....	....	285,000	27.5	....	....	....	....	....	....	....	25	....
C25UA	‡	....	....	295,000	25.2	....	....	....	....	....	....	....	25	....
C30UA	‡	....	....	358,000	31.8	....	....	....	....	....	....	....	30	....
C45UA	‡	....	....	512,000	56.6	....	....	....	....	....	....	....	45	....
C50UA	‡	....	....	580,000	53.6	....	....	....	....	....	....	....	50	....
C70UA	‡	....	....	828,000	84.0	....	....	....	....	....	....	....	75	....
†Rated under ARI standard. ‡Available in both horizontal and vertical units.														
Laurel—Laurel Products, Inc., River Falls, Wis.														
AC24H	19	27	....	24,000†	....	55/...‡	....	4.0	4	2,200	Side	Tecumseh	2	B21U18
AC36H	24½	41	25½	36,000†	....	80/72‡	....	5.70	4	2,880	Side	Copeland	3	4U18-302
AC48H	24½	51	25½	48,000†	....	128/98‡	....	7.32	4	3,300	Side	Copeland	4	4U26-402
AC60H	26½	57	25½	60,000†	....	129/...‡	....	9.15	4	4,125	Side	Copeland	5	4U31-502
†Rated under ARI standard 210-58. ‡Single-phase/three-phase.														
Lennox—Lennox Industries, Inc., 200 South 12th Ave., Marshalltown, Iowa														
HSA2-201	20½	34⅝	27¼	22,000	2.76	50	317	3.75	3	1,950	Rear	Bendix-W.	2	CH490TA-2
HSA5-201	28	30	30	22,000	2.68	50	335	3.16	4	1,740	Front	Bendix-W.	2	CH490TA-2
HSA2-251	20½	34⅝	27¼	30,000	....	....	....	3.75	4	1,855	Rear	Bendix-W.	2½	YCH670TA-2
HSA2-300	28	28⅝	32¼	34,000	4.27	78	285	5.32	3	2,300	Rear	Tecumseh	3	PJE301
HSA2-400	28	44⅝	33¼	43,000	5.48	110	515	7.07	3	3,870	Rear	Tecumseh	4	PFB402
HSA2-500	30½	49⅛	38⅝	60,000	7.19	127	550	8.75	3	5,000	Rear	Tecumseh	5	PFB502
HSA2-753	34	67¼	35½	92,000	9.93	135	1121	12.5	3	6,820	Rear	Copeland	7½	MR50-761F
HSA2-1103	39½	80⅝	36⅝	....	....	....	1456	15.62	4	8,800	Rear	Copeland	11	9R9-1010
HSA2-1703	64⅛	80⅝	41	204,000	18.62	250	1700	28.3	4	16,000	Rear	Copeland	17	4R48-2006
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

Split Systems—Condensing Units

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Nominal Rating (Btuh)	Kw Input Total	Locked Rotor Amps	Net Weight	Condenser Face Area (Sq Ft)	Rows Deep	Cfm	Air Discharge	Compressor Make	Hp	Comp. Mfrs. Model No.
Meyer, Weir-Meyer—The Meyer Furnace Co., 1300 S.W. Washington St., Peoria, Ill.														
*24AC	28⅝	30¼	27½	22,000	3.0	55.0	205	3.6	2	1,750	Side	Tecumseh	2	B21U18
*35AC	28¼	30¼	27½	33,000	4.4	78.0	265	4.1	3	1,900	Side	Tecumseh	3	JE300
*47AC	28¼	48⅝	31⅝	45,000	6.1	110.0	445	7.7	2	3,600	Side	Tecumseh	4	PFB400
*60AC	28¼	48⅝	31⅝	56,000	7.4	125.0	495	7.7	3	4,200	Side	Tecumseh	5	FB500
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mueller Climatrol—Mueller Climatrol, Div. of Worthington Corp., 2005 W. Oklahoma Ave., Milwaukee 1, Wis.														
908-1-81-3	38½	33	27½	50,000†	5.93	...	755	9.1	3	5,200	Side	Worthington	5	S37C/470C
908-1-73-4	41¼	67	31⅝	80,000†	9.19	...	995	12.5	5	6,500	Side	Worthington	7.5	S12C/518C
918-2	31⅛	28¼	24	22,000†	3.42	...	275	3.77	3	1,450	Top	Tecumseh	2	B21U18
918-1-3	30½	34½	29¾	34,000†	3.98	...	375	5.69	3	2,700	Top	Tecumseh	3	JE300
918-4	29⅜	34½	48¼	45,000†	5.84	...	675	4.16	(2) 3	4,200	Top	Tecumseh	4	PFB400
918-5	29⅜	34½	48¼	56,000†	7.30	...	685	5.29	(2) 3	4,650	Top	Tecumseh	5	PFB500
928-3	26½	49	32¾	34,000†	4.40	...	415	...	...	3,250	Top	Tecumseh	3	JE300
928-4	26½	49	32¾	45,000†	5.40	...	735	...	...	3,400	Top	Tecumseh	4	PFB400
928-5	26¾	59	36¾	57,000†	7.40	...	800	...	...	4,450	Top	Tecumseh	5	PFB500
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
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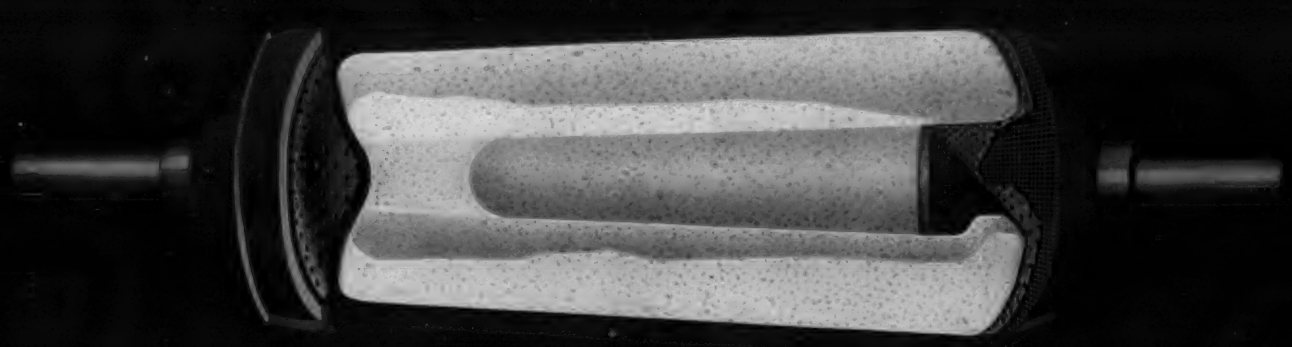
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

†Rated under ARI standard.

Model No.	Comp. Mfrs. Model No.
...	...
...	...
...	...

ANNOUNCING...THE GREATEST ADVANCEMENT

IN REFRIGERATION DRIERS SINCE MOLECULAR SIEVES!



new KMP® FILTER-KORE *drier...*

the only solid core drier made of 100% Molecular Sieves

EXCLUSIVE!
LOWEST PRESSURE DROP per unit area of core of any block desiccant

EXCLUSIVE!
LARGEST DRYING CAPACITY per cubic inch of core of any block desiccant

EXCLUSIVE!
GREATEST ACID REMOVAL...
Maximum protection of system from acid and sludge after motor burnout

KMP KENMORE MACHINE PRODUCTS, INC. • LYONS, NEW YORK

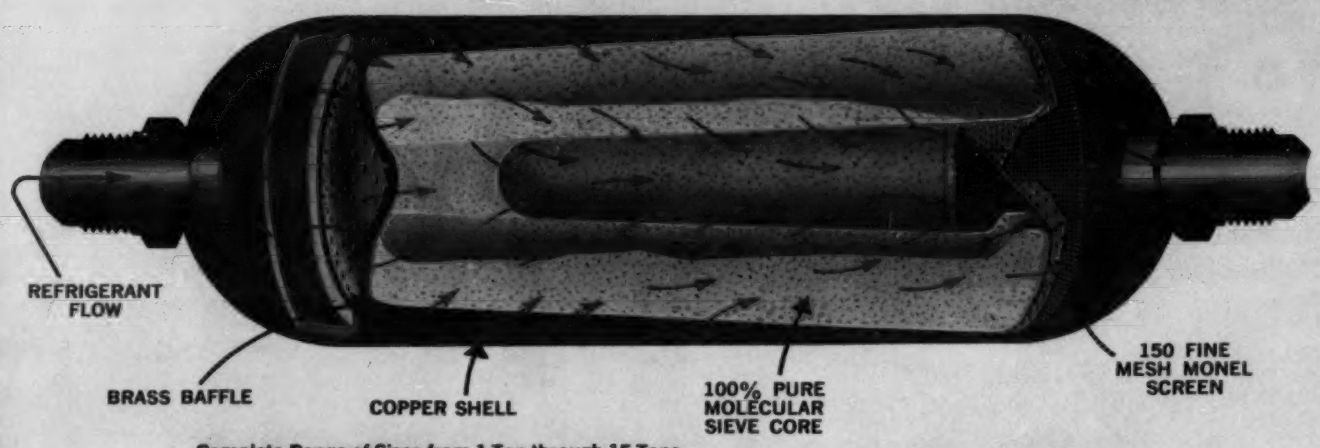
KMP FILTER-KORE *drier...*

HIGHEST CAPACITY... MOST EFFICIENT AND TROUBLE-FREE

By eliminating plastics, fibre board, cotton and other foreign materials from the inside of the drier and by using a solid core of 100% pure Molecular Sieves without diluents, the KMP FILTER-KORE drier gives maximum protection (better than any other desiccant) to the system from acid and sludge.

FILTER-KORE delivers fine, selective filtration without powdering or channelling of refrigerant through the core. The drier is manufactured from non-corrosive materials compatible with refrigerants and oil. Before sealing the highest degree of reactivation is used of any block desiccant—600°F at 500 micron vacuum.

For the most efficient, the longest lasting, the most trouble-free drier made, your selection should be KMP FILTER-KORE.



Complete Range of Sizes from 1 Ton through 15 Tons.

COMPARISON OF BLOCK DESICCANT DRIERS

	DRIER A	DRIER B	DRIER C	KMP FILTER-KORE
1. USE ALL MOLECULAR SIEVE	NO	NO	NO	YES
2. ACID REMOVAL	GOOD	GOOD	GOOD	EXCELLENT
3. FULL FLOW FILTRATION	YES	YES	YES	YES
4. HIGH TEMPERATURE WATER CAPACITY	FAIR	FAIR	FAIR	EXCELLENT
5. WILL HOLD AS MUCH MOISTURE AT 75°F AND 125°F	NO	NO	NO	YES
6. ALL NON-CORROSIVE METAL INTERNAL CONSTRUCTION	NO	NO	NO	YES

KMP FILTER-KORE SPECIFICATIONS

Model Filter-Kore	SAE Flare	Dia.	Length	Water Capacity Ratings R-12 75°F	R-12 125°F	R-22 75°F	R-22 125°F	Filter Area Sq. In.	Recommended Tonnage R-12	R-22
1FK	¼	1⅝	4⅞	43	43	32½	32½	9	1	¾
2FK	¼*	1⅝	5⅞	70	70	53½	53½	12	2	1
	*Also available in ⅜ SAE Flare									
3FK	¼*	1⅝	6¼	100	100	75	75	13	3	1½
	*Also available in ⅜ and ½ SAE Flare									
4FK	¼*	2¼	7	160	160	122	122	20	4	2½
	*Also available in ⅜, ½ and ⅝ SAE Flare									
8FK	⅜*	2¼	9⅛	325	325	247	247	29	8	5
	*Also available in ½ and ⅝ SAE Flare									
10FK	½*	3	9¹⁵⁄₁₆	400	400	302	302	35	10	6
	*Also available in ⅝ SAE Flare									
15FK	½*	3	11⅞	600	600	455	455	54½	15	9
	*Also available in ⅝ and ¾ SAE Flare									

NOTE: FILTER-KORE DRIERS AVAILABLE IN ALL SIZES WITH SOLDER CONNECTIONS

KMP

KENMORE MACHINE PRODUCTS, INC. • LYONS, NEW YORK
IN CANADA: Kenmore Machine Products (Canada) Limited, Grimsby, Ontario
IN EUROPE: Kenmore Inc., A.S., Oslo, Norway

Split Systems—Condensing Units

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Nominal Rating (Btuh)	Kw Input Total	Locked Rotor Amps	Net Weight	Condenser Face Area (Sq Ft)	Rows Deep	Cfm	Air Discharge	Compressor Make	Hp	Comp. Mfrs. Model No.
Typhoon—Typhoon Air Conditioning Div., Hupp Corp., 505 Carroll St., Brooklyn 15 N. Y.														
3 ACCU	45	40	25¼	37,000	—	68	335	5.62	4	3,500	Rear	Tecumseh	3	JE300
5 ACCU	52	52	27½	63,500	—	125	785	7.47	5	5,800	Rear	Copeland	5	NR-46-501
8 ACCU	56	62	35	85,600	—	135	1140	13.0	4	7,800	Top/Rear	Copeland	7½	MRG-750
10 ACCU	56	62	35	114,000	—	180	1315	13.0	6	8,600	Top/Rear	Copeland	10	9R8-1000
151 ACCU	56	96¼	35½	172,000	—	250	1753	21.5	6	13,900	Rear	Copeland	15	4R48-1500
18 ACCU V/H	112/56	62/124	35	199,600	—	135/180	2574	26.0	5‡	16,100	Rear	Copeland	7½, 10	†
20 ACCU V/H	112/56	62/124	35	228,000	—	180/180	2608	26.0	6	17,200	Rear	Copeland	(2) 10	9R8-1000
8 FACS	51⅝‡	68¼	48⅝	86,600	—	135	1600	13.1	4	8,000	Top	Copeland	7½	MRG-750
10 FACS	51⅝‡	75⅛	48⅝	114,000	—	180	1900	15.9	4	10,000	Top	Copeland	10	9R8-1000
15 FACS	51⅝‡	101⅛	48⅝	172,000	—	250	1600	23.8	4	14,000	Top	Copeland	15	4R48-1500

‡Maximum, adjustable to 80⅝ in. §Average. †MRG-750 and 9R8-1000.

usAIRco—United States Air Conditioning Corp., P.O. Box 360, Delaware, Ohio														
8330B	27	27	43	31,000	4.26	83	450	9.3	3	2,550	Front	Tecumseh	3	JE300
8350B	27	27	43	53,000	7.05	152	515	9.3	3	4,250	Front	Copeland	5	NR46-503C
8375B	27	42	54	80,000	9.40	181	930	19.0	2	7,000	Front	Copeland	7½	MR50-761
83100B	27	42	54	106,000	10.80	216	970	19.0	3	8,900	Front	Copeland	10	9R8-1000
83150B	47	48	65	154,000	19.0	253	1225	30.0	3	12,700	Front	Copeland	(2) 7½	MR50-761
83200B	47	48	65	208,000	22.8	422	1550	30.0	4	16,500	Front	Copeland	(2) 10	9R8-1000

Vikimatic—Vikimatic, Inc., 1747 Chester Ave., Cleveland 14, Ohio														
*EM-301	34	26¼	28	22,500	2.6	43	345	3.2	3	2,000	Side	Bendix-W.	2	CH490TA-2
*RP-301-3	33½	30	30	35,300	3.7	78	335	6.4	3	2,500	Top	Tecumseh	3	JE300
*RP-401-3	33¾	30	30	47,000	5.3	110	427	6.4	3	3,000	Top	Tecumseh	4	FFB400
*RP-501-3	36	36	36	59,100	6.5	125	454	8.3	4	3,500	Top	Tecumseh	5	FB500
*RPR-700	35	42	42	90,000	8.15	125	525	12.0	4	4,500	Top	Copeland	7½	MRG750

Waterbury—Waterman-Waterbury Co., 1121 Jackson St., N. E., Minneapolis 13, Minn.														
21EM	34¼	26½	28	23,700	2.7	48	345	3.2	3	2,000	Side	Bendix-W.	2	CH490TA-2
31EM	31	30½	28	37,500	3.7	78	385	4.0	4	2,500	Side	Tecumseh	3	PJE300
301(3)RP	33¼	30¼	30½	35,300	3.7	78/68	335	6.4	3	2,500	Top	Tecumseh	3	JE300/PJE300
41EM	31	30½	28	47,000	4.22	126	310	5.5	4	3,000	Side	Copeland	4	4U26-402
401(3)RP	33¼	30¼	30½	47,000	5.3	110/78	427	7.08	3	3,000	Top	Copeland	4	4U26-402
51EM	31	55½	28	59,100	4.93	129	518	6.6	4	3,500	Side	Copeland	5	4U31-502
501(3)RP	35	36¼	36½	59,100	6.5	125/80	454	8.33	4	3,500	Top	Tecumseh	5	FB500/PFB500
701RP	40	42¼	42¼	83,500	8.15	135	850	11.63	4	4,500	Top	Copeland	7½	MR50-761F

Add letter R to model number for receiver tank unit. All models available with sweat fittings, holding charge, and/or breakaway valve with full operating charge.

Weatherite—International Oil Burner Co., 3800 Park Ave., St. Louis 10, Mo.														
CUF-3000	14	29	43	22,000	3.25	48.0	268	4.35	3	1,550	Side	Bendix-W.	2	CH490TA-2

Weathermaker—Carrier Air Conditioning Co., Carrier Pkwy., Syracuse, N. Y.														
38BA002	22¼	44	22	25,000†	—	—	220	4.53	2	2,250	Front	Carrier	2	6A25
38BA003	22¼	44	22	30,000†	—	—	255	4.53	3	2,140	Front	Carrier	2½	6A25
38BA004	22¼	44	22	37,000†	—	—	265	4.53	4	3,080	Front	Carrier	3	6A25
38E5	29	40½	29	54,000†	—	—	450	6.85	4	2,700	Rear	Carrier	5	6D44
38E6	29	40¾	29	59,000†	—	—	485	6.85	4	2,700	Rear	Carrier	7½	6D48
38E9	44⅛	36¼	36½	91,000†	—	—	940	14.2	3	7,250	Front	Carrier	7½	6D73
38E12	44⅛	36¼	36½	123,000†	—	—	1080	13.8	5	7,380	Front	Carrier	10	6D73
38AA0016	20¾	54	100	168,000	—	—	950	26.2	3	13,000	Top	Carrier	15	6D75
38AB0016	20¾	54	100	168,000	—	—	1000	26.2	3	13,000	Top	Carrier	15‡	6D75

†Rated under ARI standard 210-58. ‡Capacity control type compressor.

Weathertrol—Therm-Air Mfg. Co., 1000 N. Division St., Peekskill, N. Y.														
AIR 2	25	54	30	25,000†	—	—	—	6.88	3	2,400	Opt.	Tecumseh	2	—
AIR 3	35	54	30	35,000†	—	—	—	6.88	3	3,400	Opt.	Tecumseh	3	—
AIR 5	40	68	34	57,000†	—	—	—	10.32	3	4,800	Opt.	Copeland	5	—
AIR 7½	40	88	34	83,000†	—	—	—	—	—	—	—	Copeland	7½	—
AIR 10	—2 Model AIR 5—			114,000†	—	—	—	—	—	—	—	Copeland	(2) 5	—
AIR 15	—2 Model AIR 7½—			166,000†	—	—	—	—	—	—	—	Copeland	(3) 7½	—

†Rated under ARI standard 210-58.

Weatherwise—Aug. G. Barkow Mfg. Co., Inc., 2230 S. 43rd St., Milwaukee 46, Wis.														
*RO5-A	23	34	29	38,400	—	78	310	3.82	4	2,400	Side	Tecumseh	3	JE300
*RO5-A	27⅝	51⅛	34⅛	59,500	—	125	514	7.32	4	4,400	Side	Tecumseh	5	FB500
RO75-A	55⅛	51⅛	34⅛	90,000	—	120	812	14.66	4	6,500	Side	Brunner	7½	7SHF
RO100-A	55⅛	51⅛	34⅛	122,000	—	125‡	976	14.66	4	8,800	Side	Tecumseh	(2) 5	FB500

‡Each.

Welbilt—Welbilt Air Conditioning & Heating Corp., R-524 Lakewood Rd., Farmingdale N. J.														
*WRCA-27	24½	26	30	21,000	3.0	—	205	4.13	4	2,000	Side	Tecumseh	3	B21U18
*WRCA-27-39	28⅝	26	32	33,000	3.64	—	265	4.56	6	3,000	Side	Tecumseh	3	B21U18
*WRCA-47-49	33⅝	38	41⅝	42,000	5.44	—	445	5.41	6	4,000	Side	Tecumseh	4	(2) B21U18‡
*WRCA-57-59	33⅝	34	41⅝	57,000	6.7	—	505	7.85	6	6,000	Side	Tecumseh	5	PFB500

‡Or PFB400.

Western & Atlas—Global Air Conditioning Corp., 2045 Evans Ave., San Francisco 24, Calif.														
*21RCS	23¾	29¾	22¼	22,850	3.00	55.0	275	4.05	3	2,450	Side	Tecumseh	2	B21U18
23RCS	23¾	29¾	32¼	21,500	2.90	39.0	270	4.05	3	2,450	Side	Bendix-W.	3	H490TA-3
*21(3)RCS-1	23¾	29¾	32¼	33,200	3.85	78/68	315	4.05	3	2,450	Side	Tecumseh	3	JE300
*21(3)RCD-1	28	37¾	42	34,850	4.13	78-68	400	4.6	4	2,400	Front	Tecumseh	3	JE300
*21(3)RCD-2	28½	28	42	40,750	4.53	126/99	410	5.4	4	2,400	Front	Tecumseh	4	PJE400
*41(3)RCS	36¾	28½	42	47,500	4.8	110/76	575	7.56	4	3,250	Side	Tecumseh	4	PFB400
*41(3)RCD-1	33¾	34¾	50	47,500	5.31	110/78	518	5.85	4	3,400	Front	Tecumseh	4	PFB400
*51(3)RCS	36¾	42	38½	59,000	7.23	127/105	615	9.0	4	3,250	Side	Tecumseh	5	PFB500
*51(3)RCD	33¾	37¾	64¼	61,000	6.99	113/94	750	9.10	3	4,200	Front	York	6½	SA482
83RCD-1	33¾	37¾	74¼	93,750	9.55	128	900	13.30	3	6,000	Front	York	8¾	TA682

Westernaire (Private Brand)—Western Supply Co., Mfg. Div., Hutchinson, Kan.														
31EM	34¼	26½	28	23,700	2.7	48	345	3.2	3	2,000	Side	Bendix-W.	2	CH490TA-2
31EM	31	30¾	18	37,500	3.7	78	385	4.0	4	2,500	Side	Tecumseh	3	PJE300
41EM	31	30¾	18	47,000	4.22	126	310	5.5	4	3,000	Side	Copeland	4	4U26-402
51EM	31	55¾	18	59,100	4.93	129	518	6.6	4	3,500	Side	Copeland	5	4U31-502
301(3)RP	33¼	30¼	30½	35,300	3.7	78/68	335	6.4	3	2,500	Top	Tecumseh	3	JE300/PJE300
401(3)RP	33¼	30¼	30½	47,000	5.3	110/78	427	7.08	3	3,000	Top	Copeland	4	4U26-402
501(3)RP	35	36¼	36½	59,100	6.5	125/80	454	8.33	4	3,500	Top	Tecumseh	5	FB500/PFB500
701RP	40	42¼	42¼	83,500	8.15	135	850	11.63	4	4,500	Top	Copeland	7½	MR50-761F

Add letter R to model number for receiver tank unit. All models available with sweat fittings, holding charge, and/or breakaway valves with full operating charge.

Westinghouse—Westinghouse Electric Corp., Air Conditioning Div., Staunton, Va.														
AU 201B	24⅝	31⅝	31¼	22,000†	2.55	—	220	5.7	2	1,800	Top	Tecumseh	2	—
AU 401B	27¼	31⅝	31¼	32,000†	4.3	—	330	7.0	3	2,500	Top	Tecumseh	3	—
AU 501	31⅝	36⅝	36¾	44,000†	5.9	—	530	11.3	2	4,500	Top	West'house	4	—
AU 452B	46¼	36	28	37,000†	5.0	—	560	6.8	3	2,350	Top	West'house	3	—
AU 652C	46¼	51½	30	56,000†	7.6	—	775	10.4	3	4,100	Top	West'house	5	—
AU 902B	46¼	51½	30	75,000†	10.5	—	920	13.4	3	4,800	Top	West'house	7½	—
AU 1102	37⅞	69	34	106,000†	14.6	—	971	21.3	3	—	Top	West'house	(2) 5	—
AU 1802	47⅞	68	34	154,000	19.24	—	1010	28.3	3	—	Top	West'house	(2) 7½	—

†Rated under ARI standard 210-58.

Wethermatic—The Williamson Co., 3500 Madison Rd., Cincinnati 9, Ohio														
2.0HP	33⅝	48¼	21¼	24,000†	—	—	320	—	—	2,200	Side	Bendix-W.	2	—
2.5HP	33⅝	48¼	21½	30,000†	—	—	374	—	—	2,750	Side	Tecumseh	3	—
3.0HP	33⅝	48¼	21½	36,000†	—	—	396	—	—	3,300	Side	Tecumseh	3	—
4.0HP	33⅝	53¼	28⅝	48,000†	—	—	588	—	—	4,400	Side	Tecumseh	4	—
5.0HP	34	54	30	60,000†	—	—	700	—	—	5,500	Side	Tecumseh	5	—
7.5HP	41	67	32	90,000†	—	—	864	—	—	8,250	Side	Copeland	7½	—
10.0HP	41	67	32	120,000†	—	—	1100	—	—	11,000	Side	Copeland	10	—

†Rated under ARI standard.

Williams Air-O-Matic—Williams Oil-O-Matic Heating Co., Div. of National Union Electric Co., 851 W. Third Ave., Columbus 14, Ohio														
*42-21	25½	37	30	23,000	3.6	52.6	314	3.66	3	1,800	Side	Tecumseh	2	—
*42-31, 33	28	33½	34¾	35,000	3.65	78/68	313	5.5	3	2,400	Side	Tecumseh	3	—
*42-41, 43	28	57¾	34½	46,000	5.35	110/78	525	7.33	3 (2)	2,400	Side	Tecumseh	4	—
*42-51, 53	28	57¾	34½	60,000	7.00	128/90	535	9.75	3 (2)	2,400	Side	Tecumseh	5	—

Wizard—Western Auto Supply Co., 2107 Grand Ave., Kansas City, Mo.														
*6JF2060, 61	28¼	30½	27⅞	33,000	4.5	22.8/17.7	365	3.65	3	1,700	Side	Tecumseh	3	JE300
*6JF2070, 71	28⅝	48⅝	31⅝	45,000	6.08	34.6/31.3	445	7.73	3	4,000	Side	Tecumseh	4	PFB400
*6JF3060, 61	28⅝	48⅝	31⅛	56,000	7.36	37.7/32.4	455	7.73	3	4,000	Side	Tecumseh	5	FB500

Worthington—Worthington Corp., Ampere Station, East Orange, N. J.														
RACM-420	30½	34½	29¾	34,000	4.62	—	680	5.7	3	2,600	Top/Side	Tecumseh	3	JE300
RAC-610	33½	53	27½	54,000	7.35	—	765	9.4	4	5,200	Top/Side	Worthington	5	2JF3
RAC-810	41¼	67	31⅝	79,500	10.9	—	995	13.5	5	6,500	Top/Side	Worthington	7½	2JF5
RAC-1010	48⅝	67	31¾	104,000	13.23	—	1060	13.8	5	8,100	Top/Side	Worthington	10	2JF5
RAC-1510	58⅛	64	57¾	170,000	20.1	—	1500	40.0	3	19,000	Top	Worth.	(2) 7½	2JF5
RAC-2010	58⅛	64	57¾	208,000	21.2	—	1650	40.0	4	19,000	Top	Worth.	(2) 10	2JF5

York—York Div., Borg-Warner Corp., York, Pa.														
*HA36	25⅝	34⅛	34½	37,000	4.13	—/41.32	305	6.24	3	2,700	Top	York	(2) 1½	F2656
*HA48	45⅛	48⅝	34½	48,000	6.8	—/51.22	310	9.04	3	3,300	Top	York	(2) 2	G2672
*HA72	45⅛	48⅝	34½	65,000	7.75	62.4/72.41	485	13.24	3	5,400	Top	York	(2) 3	H2780
*CA24	27	39¼	34	24,000	2.89	—/50.41	225	5.84	3	1,800	Top	York	2	G2672
*CA36	27	39¼	34	34,000	3.96	—/66.31	250	5.84	3	2,700	Top	York	3	H2780
CA60	30	48⅛	38¼	58,100	6.6	109/1483	600	7.3	3	4,200	Side	York	5	60U
CA90	53¼	36	36	90,000	7.3	116/1353	625	9.0	3	4,200	Top	York	5	SA482
CA75	33	64¼	38¼	86,200	11.0	162/...‡	770	11.2	3	6,000	Side	York	7½	TA682
CA90	64¾	36	36	90,200	11.1	162/...‡	740	13.5	3	6,000	Top	York	7½	TA682
CA120	64	72	36	122,000	14.4	187/...‡	1225	18.0	3	8,400	Top	York	(2) 5	SA482
CA180	66¼	72	36	187,500	22.2	198/...‡	1460	27.0	3	13,000	Top	York	(2) 7½	TA682
CA270	82⅝	66⅝	47½	278,000	31.6	189/...‡	2000	40.5	3	16,000	Top	York	(3) 7½	TA683

‡3-phase/1-phase. HA models rated under ARI standard 210-58.

Split Systems—Evaporator, Blower-Evaporator Units

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacity (Btuh)	Refrig-erant Control	Net Weight	Coil Face Area (Sq Ft)	Coil Rows Deep	Blower Cfm	Blower Rpm	Motor Hp	Air Filter Dimensions (In.)
31 LSU	24	29½	61¼	37,000	X-Valve	280	3.9	4	1,300	—	¾	22x22x1
51 LSU	24	40	61¼	60,600	X-Valve	365	4.82	4	2,000	—	½	16x22¼x1, 20x22¼x1
81 LSU	24	49	61¼	97,200	X-Valve	400	4.82	6	2,800	—	¾	14x22¼x1, 20x22¼x1
101 LSU	24	50	61¼	125,000	X-Valve	500	6.33	6	4,000	—	1	(3) 22x22x1
151 LSU	24	72	61¼	191,000	X-Valve	675	9.45	6	6,000	—	1½	(3) 22x22x1
201 LSU	24	84	60½	252,000	X-Valve	920	10.9	4	8,000	—	3	(6) 16x25x1
251 LSU	24	84	60½	310,000	X-Valve	1050	10.9	5	10,000	—	5	(6) 16x25x1
—	—	—	—	—	—	—	—	—	—	—	—	—

usAIRco—United States Air Conditioning Corp., P.O. Box 360, Delaware, Ohio												
7230B	19	24	26	31,000	X-Valve	185	2.19	4	1,200	805	½	P 16x20x1
7250B	22	28	40	53,000	X-Valve	345	3.79	4	2,000	690	½	P 20x25x1
(H) 7275B	24	42	40	80,000	X-Valve	415	6.3	4	3,000	940	¾	(3) P 20x20x1
(H) 72100B	24	54	42	106,000	X-Valve	520	8.2	4	4,000	980	1¼	(3) P 20x25x1
(H) 72150B	26	73	53	158,000	X-Valve	710	12.4	4	6,000	640	2	P 20x20x1, (2) 20x25x1
—	—	—	—	—	—	—	—	—	—	—	—	—

Vikimatic—Vikimatic, Inc., 1747 Chester Ave., Cleveland 14, Ohio												
UCC-2	14	20	23¾	22,500	Cap.	77	2.6	4	800	—	—	—
UCC-3	14	20	23¾	35,300	Cap.	85	3.0	4	1,200	—	—	—
UCC-4	14¾	20	29	47,000	Cap.	100	4.9	4	1,600	—	—	—
UCC-5	14¾	35	29	59,100	Cap.	100	4.9	4	2,000	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—

Waterbury—Waterman-Waterbury Co., 1121 Jackson St., N. E., Minneapolis 13, Minn.												
200UC-UE	13⅞	20	24	23,700	Cap./X-V	31	—	—	—	—	—	—
(H) 200BC	20¼	24	28	23,700	Cap.	150	—	—	—	—	—	—
200BPA	57⅛	25⅛	21⅝	23,700	Cap./X-V	—	—	—	—	—	—	—
300UC-UE	13⅞	30	24	37,000	Cap./X-V	34	—	—	—	—	—	—
(H) 300BC	20¼	24	28	37,500	Cap./X-V	170	—	—	—	—	—	—
300BPA	57⅛	25⅛	21⅝	37,500	Cap./X-V	—	—	—	—	—	—	—
400UC-UE	14⅞	30	24	47,000	Cap./X-V	39	—	—	—	—	—	—
(H) 400BC	25	33½	40⅝	47,000	Cap./X-V	220	—	—	—	—	—	—
400BPA	66⅝	35	24⅞	47,000	Cap./X-V	—	—	—	—	—	—	—
500UC-UE	19	25	30	59,100	Cap./X-V	72	—	—	—	—	—	—
(H) 500BC	25	33½	40⅝	59,100	Cap./X-V	250	—	—	—	—	—	—
(H) 750BC	21½	45⅞	51⅞	83,500	X-Valve	330	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—

Other units offered: Fan coil 2 to 10 hp., counterflow 2 to 5 hp., duct coil assemblies 2 to 10 hp., package type fan coil units 2 to 10 hp. (These are upright units.)

Weatherite—International Oil Burner Co., 3800 Park Ave., St. Louis 10, Mo.												
EUF-2000-UD	12	17¼	30	22,000	Cap.	54	2.36	3	750	—	—	—
(H) EUF-2BLW	16	21	34⅞	22,000	Cap.	110	2.36	3	750	1,100	.40	20x14¼x⅛
EUF-2000-OB	18	17¼	20	22,000	Cap.	54	2.36	3	750	—	—	—

Weathermaker—Carrier Air Conditioning Co., Carrier Pkwy., Syracuse, N. Y.												
(H, D) 40AA004	45	38	23	24-52,000	X-Valve	190	Variable	3	9-1,800	Variable	⅓	(3) 16x20x1
(H, D) 40AA006	45	38	23	30-62,000	X-Valve	240	Variable	3	12-2,500	Variable	½	(2) 20x20x1
(H) 38RS	21½	40	25	39-59,000	X-Valve	155	4.43	3	1,600	Variable	½	(2) 20x20x1 or 2
(H) 38R8	74¼	47½	25⅝	91,000	X-Valve	340	7.9	3	3,000	Variable	1	16x20x1, 16x25x1
38RR12	74¼	63½	25⅝	123,000	X-Valve	445	10.7	3	4,000	Variable	2	(6) 16x20x1
38RR016	63⅛	80	29¾	180,000	X-Valve	620	16.9	3	6,000	Variable	2	(3) 16x25x1, (3) 16x35x1†
38RR024	63⅛	80	29¾	240,000	X-Valve	670	18.04	4	8,000	Variable	3	(3) 16x25x1, (3) 20x35x1†
38R38	82¾	93⅝	35¾	300,000	X-Valve	1110	22.6	4	10,000	Variable	5	(8) 20x20x2
38R34	82¾	93⅝	35¾	360,000	X-Valve	1150	26.9	4	12,000	Variable	5, 7½	(6) 20x25x2, (2) 16x20x2
38RR044	90	126¼	46¼	480,000	X-Valve	1660	36.5	4	16,000	Variable	7½	(6) 20x25x2, (6) 20x20x3
38RR054	91	126¼	46¼	600,000	X-Valve	1940	46.3	4	20,000	Variable	10	(10) 20x25x2, (5) 16x25x2

†Or 2 in. depth.

Weathertrol—Therm-Air Mfg. Co., 1000 N. Division St., Peekskill, N. Y.												
V-2	18	24	22	25,000†	X Valve	130	3.75	4	800	—	—	—
V-3	18	24	22	35,000†	X Valve	130	3.75	4	1,200	—	—	—
V-5	20	30	28	57,000†	X Valve	200	4.50	4	2,000	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—

Weatherwise—Aug. G. Barkow Mfg. Co., Inc., 2230 S. 43rd St., Milwaukee 46, Wis.												
(H) HF-3	24	25	29½	37,500	X-Valve	150	3.96	4	1,200	650	¾	P 15x20x1
(H) HF-5	24¼	36⅝	48⅝	57,000	X-Valve	265	4.0	4	2,400	700	¾	P (2) 15x20x1
(H) HF-75	22	50	36	90,000	X-Valve	250	5.42	4	3,000	618	¾	P (3) 15x20x1
—	—	—	—	—	—	—	—	—	—	—	—	—

Horizontal air flow and vertical air flow furnace coils, less blower, available for 3 hp and 5 hp models.

Welbilt—Welbilt Air Conditioning & Heating Corp., R-524 Lakewood Rd., Farmingdale N. J.												
WRE-2A	11⅝	20¼	20½	24,800	X-Valve	48	2.01	3	800	—	—	—
WRE-3A	15¼	20¼	20½	35,800	X-Valve	55	2.77	3	1,200	—	—	—
WRE-4A	15¼	24⅝	24⅝	47,200	X-Valve	69	3.63	3	1,600	—	—	—
WRE-5A	18⅛	24⅝	24⅝	59,400	X-Valve	86	4.62	3	2,000	—	—	—

Western & Atlas—Global Air Conditioning Corp., 2045 Evans Ave., San Francisco 24, Calif.												
(U) 3EA	16⅞	18	21⅝	—	X-Valve	35	3.33	3	8-1,400	—	—	—
(U) 4/5EA	17⅛	27	21⅝	—	X-Valve	48	3.62	3	18-2,200	—	—	—
(U) 5EA-1	16⅛	44	21⅝	—	X-Valve	56	5.33	3	18-2,200	—	—	—
(U) 6EA	16⅛	54	21⅝	—	X-Valve	69	6.70	3	28-3,400	—	—	—
(H) 3EH	25	31	19	—	X-Valve	83	3.25	3	11-1,800	—	—	—
(H) 4/5EH	31	37	19	—	X-Valve	62	5.33	3	16-2,200	—	—	—
(H) 6EH	31	47	19	—	X-Valve	80	7.00	3	24-3,200	—	—	—
(D)

Inside Dope

By GEORGE F. TAUBENECK

(Continued from Page 1)

considered for a high White House post.

What a way for a new President to get started!

DICK BEHR

Bronx, N. Y.

Editor:

Your vicious attack upon Prof. Arthur Schlesinger, Jr., in your Sept. 19 issue was completely unwarranted and uncalled for, especially now that President Kennedy appointed him a full time White House aide.

I fail to see that connection between Professor Schlesinger of Harvard and the refrigeration and air conditioning industry.

This is a free country, and anybody living here is amongst other things blessed with freedom of speech which includes you and me, but I will not stand for anyone expressing political opinions, which may be contrary to mine, using my subscription fee to do so.

RALPH B. HARRIS

* * *

Answer: Connection between Prof. Schlesinger and our industry should be obvious. He attacked air conditioning as being a "wasteful luxury."

It was his thesis that "tail-fins and air conditioning" (among other things) are being foisted upon the American public by advertising, which he insists, is anti-social in itself.

His charges against our business, and on advertising, were unwarranted. As spokesman for the industry, we replied in kind. He had it coming.

Business didn't ask to get into politics. But politics surely has invaded business.

And if a Harvard history professor has a right to sneer at air conditioning and advertising, surely a publication devoted to the former (and supported by the latter) has good reason to offer a rebuttal.

Incidentally, if you "won't stand for" any publication expressing opinions contrary to your own, we hope you will enjoy an exclusive diet of comic books, because you won't have much of anything else left to read.

Freedom of the press, by your definition, would be freedom only to agree with you. (Without advertising, by the way, your ACHRN subscription "fee" would be closer to $100 a year than $6.)

The fact that 22,000 subscribers, and several hundred advertisers, voluntarily ante up their "fees" is what insures freedom of speech for this newspaper—and all other members of the Free Press.

Thus no subscriber, nor any advertiser, is in a position to control our American "right" to call the shots as we see them editorially.

Next question?

This Is for Real?

Back to the Harvard professor. *Printer's Ink* magazine queried Schlesinger as to his attitude toward advertising and business in general. His reply:

"I have your note concerning attitudes toward advertising. My view of advertising was well summed up by John Ruskin in his speech to the manufacturers of Bradford nearly a century ago:

" 'Whatever happens to you, this, at least, is certain, that the whole of your life will have been spent in corrupting public taste and encouraging public extravagance. Every preference you have won by gaudiness must have been based on the purchaser's vanity; every demand you have created by novelty has fostered in the consumer a habit of discontent; and when you retire into inactive life, you may, as a subject of consolation for your declining years, reflect that precisely according to the extent of your past operations, your life has been successful in retarding the arts, tarnishing the virtues, and confusing the manners of your country.' "

World Trade Corner

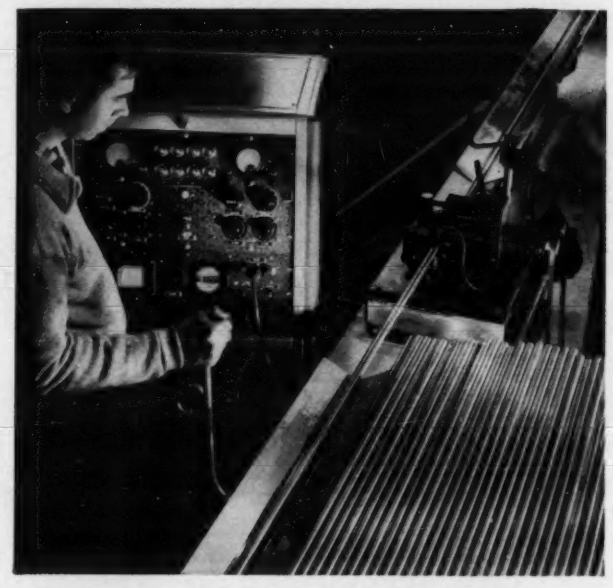
Among the natural-light snapshots which "Dope" took at the ASHRAE Exposition with his ancient "candid camera," Editorial Director Phil Redeker spotted these two as telling a world trade story.

Top: Worthington Corp., U.S.A., is surrounding the world with its sales activities. Right: ambitious Danfoss of Denmark is invading the Americas.

WHY YOU SHOULD SPECIFY

Phelps Dodge Copper Refrigeration Tube

The Famous Mine-to-Market Quality Line!



1 **FINEST QUALITY CONTROL.** Phelps Dodge refrigeration tube is carefully controlled for quality throughout fabrication, rigorously tested before being packaged to assure finest tube properties and lasting quality in service.

2 **COLOR-CODED ACR TUBE.** Phelps Dodge ACR tube is specially cleaned for refrigeration use. Extra-long coded end caps are your assurance of factory-clean tube at job site. Tube is color coded "ACR" for your protection.

3 **NEW P-D PAK CARTON.** Reel-type design of convenient new carton allows tube to be rolled or paid out quickly on job. Color-coded identification tape seals carton for protection, makes opening easy.

Quality tube sold the quality way—through authorized refrigeration wholesalers!

ACR-W WHOLESALERS ASSOCIATE

PHELPS DODGE COPPER PRODUCTS CORPORATION

New York, N.Y. • Los Angeles, Calif.

PD

Cool Collection

WHEN D. L. GARCIA, second from right, went to collect for the $14,000 installation of Typhoon air conditioning equipment in the Naval Operating Base cafeteria, he made sure the customer was standing in front of some of the equipment. Result: Rear Admiral High C. Haynesworth, commander, U. S. Naval Supply Center, was all smiles when he handed over the check. Also watching were E. P. Willis, cafeteria manager, and Edward Houghton, president, Naval Supply Center cafeteria board of directors. Garcia is with Air-Temp Control, Inc., Typhoon distributor in the Norfolk area.

Streamline Handling Of Benefit Funds

LOS ANGELES — Establishment of more efficent methods for handling and administering various benefit funds for union members in Southern California air conditioning and refrigeration work has been announced.

Set up by a joint committee of refrigeration and air conditioning contractors and representatives of the Refrigeration Fitters, Branch Local #250, the new procedures cover payments, processing, accounting, and administration of employes' health welfare and pension funds.

The fringe benefit funds are under the supervision of a joint board of trustees composed also of representatives from both labor and management.

The streamlined methods include the development of a simplified reporting form for employers contributing to the fringe benefits, employment of a professional fund administration concern to handle record and accounting details, investment of pension fund monies by an accredited banking institution in selected bonds and securities, and establishment of annuity payments for retirees.

From the Manufacturers

Service Bulletins

In this department, the NEWS presents significant items from information published in the Service and Technical bulletins of manufacturers.

A water-cooled condenser on a condensing unit in a refrigeration or air conditioning system that is exposed to freezing temperatures should be protected to avoid possible costly damage. The protection necessary differs according to the geographical location and the use of the equipment. Generally, all water pipes and water-cooled condensers, not in use, should be drained. This recommendation includes water-cooled condensers, not used in the winter, that are assembled on "air-water" condensing units.

"Shell and coil" and "shell and tube" condensers, that do not drain completely, should be blown out with compressed air, carbon dioxide, or nitrogen. Be sure a pressure reducing valve is on a carbon dioxide or a nitrogen cylinder to reduce the gas pressure to safe working pressures of 150 psig or lower.

General Chemical Div.,
Allied Chemical Corp.

'Heat Pumps of the Month'

Florida Utility Cites 3 Installations

ST. PETERSBURG, Fla. — Heat pump installations at the Howard Johnson motel here, the First National Bank in Lake Wales, and Winter Garden Lanes in Winter Garden were cited in separate "Heat Pump of the Month" reports issued in recent months by Florida Power Corp.

The new Howard Johnson motel in St. Petersburg has 52 General Electric heat pumps, each controlled within the room it serves. Heat pump contractor was The Acme Co.; the electrical contractor, Tucker Electric Inc., both of St. Petersburg, and the architect, Theodore Gottfried, Miami.

Two McMillan heat pumps were installed at the new, modern First National Bank of Lake Wales. A 20-ton unit serving the main business area is subject to rapid changes in load as the sun's effect on the large glass area changes, it was pointed out. This heat pump automatically handles these changes, the report noted, adding:

"The private offices constitute an area with different load characteristics and hours of occupancy; therefore, a separate 5-ton heat pump is used for this area."

Heat pump contractor was Swartz Service Co., Lake Wales; electrical contractor, R. E. Poitras Co., Winter Haven; architect and engineer, Reymolds, Smith & Hills, Tampa.

Growing popularity of the Winter Garden Lanes required eight more lanes, Florida Power reported. The selection of York heat pumps, installed by Ned Vick, Inc., Winter Garden, for the additional lanes, "illustrates the repeat business generated by a good product and a good contractor," it was stated.

Gaines, Inc., owner of Winter Garden Lanes, originally chose the York heat pump system for both the comfort of its customers and to protect the quality of its 12 precision lanes.

9-Story Windowless Research Building To Be Conditioned

PHILADELPHIA — Air conditioning will be a feature of a $4,000,000, nine-story, windowless medical research building to be constructed here as part of the Temple University Medical Center.

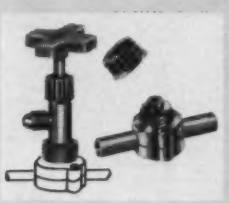
Pre-cast, pre-stressed concrete floors will have 17,000 9-in. round openings so that it will not be necessary to go more than 20 ft for service connections with gas, compressed air, vacuum, distilled water, steam, hot and cold water, waste disposal, and electricity.

HENRY VALVE CO.
CONTROLLING FLOW SINCE 1914

TIME SAVERS FOR SERVICE CALLS

Henry "on-the-job" accessories are designed to speed up servicing operations and make possible more profitable calls per day. They are considered standard equipment for refrigeration and air conditioning service.

"GOLD SEAL" SWIVEL CONTROL and LINE TAP VALVES
To Charge, Test or Purge Sealed Systems. Triple-Sealed, Tamper-Proof Valves. Tube Sizes, 3/16" thru 5/8" OD.



ADJUSTABLE LINE TAP VALVES
One-piece Needle and and Stem. Top Access Three-Screw-Clamp. Two Valves—six tube sizes, 3/16" thru 5/8" OD.

TERMINAL SEALS for hermetic units
Stop Terminal Leaks Instantly Without Opening the Compressor. No Special Tools Required.

FLEXIBLE REFRIGERANT HOSES
Featuring Retained Seal Gasket in 1/4" SAE Quick Coupler. Maximum Working Pressure 500 PSI.

CHARGING & TESTING MANIFOLD
Teflon Valve Seat and Packing. Minimum Torque Required. No Wrench.

Write for Henry Accessory Catalog No. 104AC

HENRY VALVE COMPANY
Flow Control Devices and Accessories for Refrigeration, Air Conditioning and Industrial Applications
MELROSE PARK, ILLINOIS, U.S.A. CABLE: HEVALCO, MELROSE PARK, ILL.

Packaged Air Conditioners—Commercial and Residential

Packaged Air Conditioners

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (Btuh) Cooling	Heating	Evaporator Face Area (Sq Ft)	Rows Deep	Locked Rotor Amps	Kw Input Total	Condenser Type	Water Usage Gpm/Ton	Compressor Make	Hp	Comp. Mfrs. Model No.	Refrigerant Charge (Lbs)	Control	Damper Control	Blowers No.	Cfm	Motor Hp	Air Filter No.	Dimensions	Net Weight (Lbs)
Acme—Acme Industries, Inc., Jackson, Mich.																							
PACW-D30A	76	84¼	46	254,000	—	13.3	4	375	26.1	Shell & Tube	3	Carrier	(2) 10	6D68	70#	X-Valve	No	2	8,000	2	6	P 20x20x2	4,600
PACW-25B	76	84¼	46	309,700	—	16.7	4	486	34.8	Shell & Tube	3	Carrier	10/15	6D68 & 6D75	95#	X-Valve	No	2	10,000	5	6	P 20x25x2	4,730
PACW-30B	80½	82¼	46	365,200	—	20.0	4	588	41.6	Shell & Tube	3	Carrier	(2) 15	6D75	130#	X-Valve	No	2	12,000	5	8	P 20x30x2	5,160
PACW-40B	80	106½	58	485,600	—	26.6	4	792	57.0	Shell & Tube	3	Carrier	10/(2) 15	6D68 & 6D75	155#	X-Valve	No	2	16,000	7½	12	P 35x16x2	7,140
PACW-50B	94	117½	58	596,300	—	33.3	4	926	67.3	Shell & Tube	3	Carrier	(2) 10/(2) 15	6D68 & 6D75	190#	X-Valve	No	2	20,000	7½	10	P 35x20x2	8,125
PACW-60B	102	133½	63	733,400	—	40.0	4	1116	84.3	Shell & Tube	3	Carrier	(4) 15	6D75	240#	X-Valve	No	2	24,000	10	21	P 30x16x2	10,325
PACE-D20A	76	134½	46	246,000	—	13.3	4	325	23.3	Evaporative	—	Carrier	(2) 10	6D68	50#	X-Valve	No	2	8,000	3	6	P 20x30x2	3,500
PACE-25B	76	134½	46	302,000	—	16.7	4	446	31.9	Evaporative	—	Carrier	10/15	6D68 & 6D75	68#	X-Valve	No	2	10,000	5	6	P 20x25x2	3,675
PACE-30B	80½	133½	46	366,000	—	20.0	4	536	38.8	Evaporative	—	Carrier	(2) 15	6D75	98#	X-Valve	No	2	12,000	5	8	P 20x30x2	4,200
PACE-40B	80	148½	56	483,500	—	26.6	4	700	51.2	Evaporative	—	Carrier	10/(2) 15	6D68 & 6D75	111#	X-Valve	No	2	16,000	7½	12	P 35x16x2	6,220
PACE-50B	94	165½	56	606,000	—	33.3	4	840	61.5	Evaporative	—	Carrier	(2) 10/(2) 15	6D68 & 6D75	136#	X-Valve	No	2	20,000	7½	10	P 35x20x2	7,135
PACE-60B	102	198½	63	731,500	—	40.0	4	1030	79.2	Evaporative	—	Carrier	(4) 15	6D75	172#	X-Valve	No	2	24,000	10	21	P 20x16x2	8,840
Addison (Private Brand)—Addison Products Co., Addison, Mich.																							
*PA23-A	23	29⅞	30¼	22,000†	—	1.9	3	64.6	3.3	Finned Tube	—	Tecumseh	2	B21U18	2#2	Cap.	No	1	750	¼	—	—	245
*PA30-A	26	33	43⅝	32,000†	—	2.8	3	89.1	4.7	Finned Tube	—	Tecumseh	3	PJE300	5#3	Cap.	No	1	1,100	¾	—	—	405
*PA40-A	26	33	49¾	40,000†	—	3.8	4	79.5	6.2	Finned Tube	—	Tecumseh	(2) 3	B21U18	5#13	Cap.	No	1	1,400	½	—	—	470
*PA60-1 & 2	37	42	57½	58,000†	—	3.7	4	146.3	7.8	Finned Tube	—	Tecumseh	5	PFB500	9#8	Cap.	No	1	1,800	⅝	—	—	745
†Rated under ARI standard.																							
AFCO—American Furnace Co., 1300 Hampton Ave., St. Louis 10, Mo.																							
*AM23	22¾	28	67	22,000†	—	1.94	3	55	3.05	Finned Tube	—	Tecumseh	2	B21U18	2#9	Cap.	No	1	800	¼	—	—	302
*AM34	22¾	28	76	34,000†	—	2.5	4	73	4.3	Finned Tube	—	Tecumseh	3	PJE300	5#	Cap.	No	1	1,200	½	—	—	408
*AM34-3	22¾	28	76	34,000†	—	2.5	4	68	4.32	Finned Tube	—	Tecumseh	3	JE300	5#	Cap.	No	1	1,200	½	—	—	386
†Rated under ARI standard 210-58.																							
Air Commander, Ambient Master—K & B Distributors, 2119 So. Atlantic Blvd., Los Angeles 22, Calif.																							
35FH 1, 3	28½	65½	32½	35,600†	—	3.3	3	78/75	4.5	Finned Tube	—	Tecumseh	3	PJE301	10#	X-Valve	No	1	1,200	½	2	16x20x1	625
48FH 1, 3	35	76½	32½	48,800†	—	4.4	3	110/78	6.2	Finned Tube	—	Tecumseh	4	PFB402	13#	X-Valve	No	1	1,600	⅝	2	16x25x1	820
58FH 1, 3	43	73	40	61,000†	—	5.5	3	125/90	8.1	Finned Tube	—	Tecumseh	5	PFB502	14#	X-Valve	No	1	2,000	¾	2	20x25x1	1,099
86FH 3	43	103	40	86,200†	—	8.0	3	145	11.8	Finned Tube	—	Copeland	7½	MR50-761	16#	X-Valve	No	1	3,000	¾	4	16x20x1	1,378
112FH 3	43	144	40	116,000†	—	11.0	3	180	13.8	Finned Tube	—	Copeland	10	9R6-1000	22#	X-Valve	No	1	4,000	1	4	20x25x1	2,000
198FH 3	43	217	40	188,000	—	16.5	3	250	23.6	Finned Tube	—	Copeland	15	4R48-2006	32#	X-Valve	No	1	6,000	1½	6	20x25x1	2,658
†Rated under ARI standard.																							
Airtemp—Airtemp, Div. of Chrysler Corp., P. O. Box 1037 Dayton 1, Ohio																							
1003-05	88¾	35	19¾	40,000	95,460	3.21	3	801	4.04	Water	1.5‡	Airtemp	3	3003-3	9#	X-Valve	No	1	1,350	½	1	15x30½x1	510
1005-04	96¼	48⅞	19¾	68,000	162,400	5.3	3	1064	6.14	Water	1.5‡	Airtemp	5	3005-02	9#	X-Valve	No	2	2,250	¾	2	22x22x1	731
1008-04	95⅛	48⅞	19¾	90,000	196,500	5.3	3	1275	8.05	Water	1.5‡	Airtemp	7½	3008	12#	X-Valve	No	2	3,000	1	2	22x22x1	1,082
1011	97	58	28	132,000	318,000	7.46	3	1901	14.15	Water	1.5‡	Airtemp	10	3011	19#8	X-Valve	No	2	4,000	1½	6	P 16⅝x18x1	1,385
1015	106	58	32	180,000	318,000	12.06	3	2241	16.73	Water	1.5‡	Airtemp	15	3015	30#	X-Valve	No	2	6,000	2	8 P (2) 16⅝x24x1, (6) 16⅝x18x1		1,709
1020-00	102	96	35	300,000	530,900	21.24	3	190-190†	30.0	Water	1.5‡	Airtemp	(2) 10	3011	Holding	X-Valve	No	2	10,000	3	8	15x30x3	3,315
1030-00	113¾	96	35	360,000	770,820	28.4	3	224-190†	42.7	Water	1.5‡	Airtemp	10/15	3011 & 3015	Holding	X-Valve	No	2	12,500	5	8	20x30x3	3,468
1035-00	113¾	96	35	420,000	824,800	28.4	3	224-224‡	50.5	Water	1.5‡	Airtemp	(2) 15	3015	Holding	X-Valve	No	2	14,500	7½	8	20x30x3	3,552
1103-07	23¼	29¾	34	35,000	—	2.52	2	661	3.82	Finned Tube	—	Airtemp	2½	3002-00	2#13	Cap.	No	1	800	¼	—	—	310
1104-00	26⅜	39⅞	46	35,000	—	2.31	3	804	5.35	Finned Tube	—	Airtemp	3	3003-00	5#6	Cap.	No	1	1,100	¼	—	—	459
3705-00	90¼	48⅞	19¾	61,000	161,120	5.3	3	1064	6.43	Finned Tube	—	Airtemp	5	3005-02	Holding	X-Valve	No	2	2,200	⅜	2	22x22x1	670
3708-00	90¼	48⅞	19¾	90,000	196,500	5.3	3	1275	8.95	Finned Tube	—	Airtemp	7½	3008	Holding	X-Valve	No	2	3,000	1	2	22x22x1	994
3711-00	97	58	28	113,000	318,000	7.46	3	1901	14.7	Finned Tube	—	Airtemp	10	3011	Holding	X-Valve	No	2	4,000	1½	6	P 16⅝x18x1	1,310
3715-00	106	58	32	154,000	318,000	12.06	3	2241	19.0	Finned Tube	—	Airtemp	15	3015	Holding	X-Valve	No	2	6,000	2	8 P (2) 16⅝x24x1, (6) 16⅝x18x1		1,470
3720-00	102	96	35	239,000	473,980	21.24	3	190-190†	23.0	Finned Tube	—	Airtemp	(2) 10	3011	Holding	X-Valve	No	2	8,800	3	8	15x30x3	3,218
3725-00	113¾	96	35	300,000	702,300	28.4	3	224-190†	36.3	Finned Tube	—	Airtemp	10/15	3011 & 3015	Holding	X-Valve	No	2	10,800	5	8	20x30x3	3,338
3730-00	113¾	96	35	350,000	764,400	28.4	3	224-224‡	42.1	Finned Tube	—	Airtemp	(2) 15	3015	Holding	X-Valve	No	2	12,800	5	8	20x30x3	3,367
§Compressor locked rotor amps. ‡At ARI conditions—75° water on, 95° water off.																							
Alton—Alton Mfg. Co., 1112 Ross Ave., Dallas, Texas																							
RE-15	74½	129¾	48¾	184,100†	—	10.0	6	220§	13.05	Evaporative	—	York	15	H153§	80	X-Valve	No	2	5,400	2	—	—	4,900
RE-20	80½	129¾	48¾	255,000†	—	12.5	6	290§	18.65	Evaporative	—	York	20	H206*	100††	X-Valve	No	2	7,200	3	—	—	5,500
RE-25	80½	129¾	48¾	316,600†	—	15.0	6	290§	23.35	Evaporative	—	York	25	H256*	120‡‡	X-Valve	No	2	9,000	3	—	—	6,500
RE-30	80½	149¼	48¾	380,000†	—	19.0	6	365§	28.35	Evaporative	—	York	30	H306*	150	X-Valve	No	2	10,800	5	—	—	7,000
RE-40	94½	192	63½	482,000†	—	24.0	6	580§	37.3	Evaporative	—	York	40	(2) H206**	200††	X-Valve	No	2	14,400	5	—	—	10,000
RE-50	94½	192	63½	613,000†	—	30.0	6	725§	47.45	Evaporative	—	York	50	(2) H256**	250	X-Valve	No	2	18,000	7½	—	—	13,500
RAC-750	70	120	60	94,000‡	180,000‡	8.0	6	145§	—	Finned Tube	—	Copeland	7½	MR50-760	60	X-Valve	No	1	3,000	1	6	16x20x2	3,000
RAC-1000	70	120	60	122,500‡	300,000‡	8.75	6	180§	—	Finned Tube	—	Copeland	10	9R8-1000	50	X-Valve	No	1	4,000	2	6	16x20x2	3,400
†Rating conditions: 80° db, 67° wb to DX coil, 76° wb air entering evap. condenser. ‡Rating conditions: 80° db, 67° wb to DX coil, 105° db to condenser. §Output. ‖At 230 volts. ¶Or Schnacke model T. *Or Schnacke model F. **Or Schnacke model E. ††R-12. ‡‡R-12 with Schnacke compressor. RE units include all electrical equipment, starters, piping, refrigerant and controls, filter optional. RAC units weather proofed for roof-top installation, include all controls, starters, piping, and refrigerant.																							
Amana—Amana Refrigeration, Inc., Amana, Iowa																							
*PK234-1A	21½	39	40	34,000†	—	1.88	4	55	3.45	Finned Tube	—	Tecumseh	2	B21U18	2#4	Cap.	No	1	950-850§	¾	—	—	292
*PK236-1, 3	25⅛	34	45½	38,000†	—	2.67	4	78/75	5.10	Finned Tube	—	Tecumseh	3	PJE300	5#3	Cap.	No	1	1360-1000	¾	—	—	438
*PK448T-1A	31½	40¼	64⅞	48,000†	—	3.75	4	55 ea.	6.80	Finned Tube	—	Tecumseh	(2) 2	B21U18	‡	Cap.	No	2	1630-1330	½	—	—	662
*PK560T-1A, 3A	31½	40¼	71	61,000†	—	4.17	5	60 ea.	9.45	Finned Tube	—	Tecumseh	(2) 2½	PJG300	‡	Cap.	No	2	2220-1940	¾	—	—	894
†Rated under ARI standard. ‡3@7 on first stage, 3@11½ on second stage. §4@5½ first stage, 4@2 on second stage. ‖.00 in. through .40 in. external static pressure.																							
American-Standard—American-Standard Air Conditioning Div., 40 West 40th St., New York 18, N. Y.																							
*ACP-21	23	29⅞	30¼	21,000†	—	1.9	3	55	12.6	Finned Tube	—	Tecumseh	2	B21U18	2#14	Cap.	—	1	750	¼**	1	24x12x1	345
*ACP-32	26	33	43⅝	32,000†	—	2.8	3	78	21.0	Finned Tube	—	Tecumseh	3	PJE300	5#3	Cap.	—	1	1,200	½	1	28x12x1	405
*ACP-40	26	33	49¾	40,000†	—	3.8	4	55 ea.	12.6ea.	Finned Tube	—	Tecumseh	(2) 2	B21U18	5#13	Cap.	—	1	1,400	½	1	28x12x1	470
*ACP-58	37	42	57½	58,000†	—	3.7	4	127	31.5	Finned Tube	—	Tecumseh	5	PFB500	9#3	Cap.	—	1	1,800	⅝	1	36x16x1	745
3C7	72⅛	42	34	36,000†	80,500‡	3.62	3	80§	—	Shell & Coil	—	Carrier	3	6D-28	9#‖	X-Valve	—	1	1,200	½	2	P 17½x17½x1	668
5C7	72⅛	42	34	60,000†	138,000‡	4.93	3	90§	—	Shell & Coil	—	Carrier	5	6D-45	11#‖	X-Valve	—	1	2,000	¾	2	P 22 x17½x1	748
8C7	74⅛	50	30	90,000†	192,000‡	7.30	3	140§	—	Shell & Coil	—	Carrier	7½	6D-48	15#‖	X-Valve	—	1	3,000	1	2	P 27½x21½x1	978
10C7	74⅛	66	30	120,000†	258,500‡	10.08	3	140§	—	Shell & Coil	—	Carrier	10	6D-48	24#‖	X-Valve	—	2	4,000	2	2	P 27½x29½x1	1,279
10D7	74⅛	66	30	120,000†	258,500‡	10.08	3	90§	—	Shell & Coil	—	Carrier	(2) 5	6D-45	22#‖	X-Valve	—	2	4,000	2	2	P 27½x29½x1	1,364
15D7	80⅛	84	31¼	180,000	385,500‡	14.68	3	140§	—	Shell & Coil	—	Carrier	(2) 7½	6D-48	30#‖	X-Valve	—	2	6,000	3	3	P 30 x25¼x1	1,725
20D7	80⅛	108	31¼	240,000	513,000‡	19.33	3	140§	—	Shell & Coil	—	Carrier	(2) 10	6D-68	48#‖	X-Valve	—	3	8,000	3	4	P 30 x25¼x1	2,287
5CA8	72⅛	42	34	52,000†	138,000‡	4.93	3	90§	—	Finned Tube	—	Carrier	5	6D-45	20#‖	X-Valve	—	1	1,900	⅝	2	P 22 x17½x1	703
8CA8	74⅛	50	30	90,000†	192,000‡	7.30	3	140§	—	Finned Tube	—	Carrier	7½	6D-48	28#‖	X-Valve	—	1	3,000	1	3	P 27½x21½x1	998
10CA8	74⅛	66	30	105,000†	258,500‡	10.08	3	150§	—	Finned Tube	—	Carrier	10	6D-68	36#‖	X-Valve	—	2	3,900	2	2	P 27½x29½x1	1,194
10DA8	74⅛	66	30	105,000†	258,500‡	10.08	3	140§	—	Finned Tube	—	Carrier	(2) 5	6D-45	40#‖	X-Valve	—	2	3,900	2	2	P 27½x29½x1	1,379
15DA8	80⅛	84	31¼	180,000	385,500‡	14.68	3	140§	—	Finned Tube	—	Carrier	(2) 7½	6D-48	56#‖	X-Valve	—	3	5,800	3	3	P 30 x25¼x1	1,580
20DA8	80⅛	108	31¼	240,000	513,000‡	19.33	3	150§	—	Finned Tube	—	Carrier	(2) 10	6D-68	72#‖	X-Valve	—	3	7,800	5	4	P 30 x25¼x1	2,107
†All commercial units are ARI rated; all residential units ASRE rated. ‡Steam. §Less plenum. ‖Based on one 220-volt, 3-phase, 60-cycle compressor only per unit. Sizes 10D, 15D, and 20D units have two compressors. ¶Based on 25 ft of liquid line. **Single motor for evaporator blower and condenser fan.																							
American-Standard—American-Standard Industrial Div., Detroit 32, Mich.																							
3C7	72⅛	42	34	36,000†	80,500‡	3.62	3	80§	—	Shell & Coil	—	Carrier	3	6D-28	9#‖	X-Valve	—	1	1,200	½	2	P 17½x17½x1	668
5C7	72⅛	42	34	60,000†	138,000‡	4.93	3	90§	—	Shell & Coil	—	Carrier	5	6D-45	11#‖	X-Valve	—	1	2,000	¾	2	P 22 x17½x1	748
8C7	74⅛	50	30	90,000†	192,000‡	7.30	3	140§	—	Shell & Coil	—	Carrier	7½	6D-48	15#‖	X-Valve	—	1	3,000	1	2	P 27½x21½x1	978
10C7	74⅛	66	30	120,000†	258,500‡	10.08	3	140§	—	Shell & Coil	—	Carrier	10	6D-48	24#‖	X-Valve	—	2	4,000	2	2	P 27½x29½x1	1,279
10D7	74⅛	66	30	120,000†	258,500‡	10.08	3	90§	—	Shell & Coil	—	Carrier	(2) 5	6D-45	22#‖	X-Valve	—	2	4,000	2	2	P 27½x29½x1	1,364
15D7	80⅛	84	31¼	180,000	385,500‡	14.68	3	140§	—	Shell & Coil	—	Carrier	(2) 7½	6D-48	30#‖	X-Valve	—	2	6,000	3	3	P 30 x25¼x1	1,725
20D7	80⅛	108	31¼	240,000	513,000‡	19.33	3	140§	—	Shell & Coil	—	Carrier	(2) 10	6D-68	48#‖	X-Valve	—	3	8,000	3	4	P 30 x25¼x1	2,287
5CA8	72⅛	42	34	52,000†	138,000‡	4.93	3	90§	—	Finned Tube	—	Carrier	5	6D-45	20#‖	X-Valve	—	1	1,900	⅝	2	P 22 x17½x1	703
8CA8	74⅛	50	30	90,000†	192,000‡	7.30	3	140§	—	Finned Tube	—	Carrier	7½	6D-48	28#‖	X-Valve	—	1	3,000	1	3	P 27½x21½x1	998
10CA8	74⅛	66	30	105,000†	258,500‡	10.08	3	150§	—	Finned Tube	—	Carrier	10	6D-68	36#‖	X-Valve	—	2	3,900	2	2	P 27½x29½x1	1,194
10DA8	74⅛	66	30	105,000†	258,500‡	10.08	3	90§	—	Finned Tube	—	Carrier	(2) 5	6D-45	40#‖	X-Valve	—	2	3,900	2	2	P 27½x29½x1	1,379
15DA8	80⅛	84	31¼	180,000	385,500‡	14.68	3	140§	—	Finned Tube	—	Carrier	(2) 7½	6D-48	56#‖	X-Valve	—	3	5,800	3	3	P 30 x25¼x1	1,580
20DA8	80⅛	108	31¼	240,000	513,000‡	19.33	3	150§	—	Finned Tube	—	Carrier	(2) 10	6D-68	72#‖	X-Valve	—	3	7,800	5	4	P 30 x25¼x1	2,107
†All commercial units are ARI rated; all residential units ASRE rated. ‡Steam. §Less plenum. ‖Based on one 220-volt, 3-phase, 60-cycle compressor only per unit. Sizes 10D, 15D, and 20D units have two compressors. ¶Based on 25 ft. of liquid line.																							
Arctic Circle—International Metal Products Div., McGraw-Edison Co., 500 South 15th St., Phoenix, Ariz.																							
PH26-1	23⅛	30	34	26,000†	—	2.0	4	—	3.5	Finned Tube	—	Tecumseh	2	B21U18	2#9	Cap.	No	1	950	½	None Furnished		221
PH37-1, 3	29½	32	58	36,300†	—	3.0	4	—	5.7/4.6	Finned Tube	—	Tecumseh	3	PJE300	7#	Cap.	—	1	1,350	½	—	—	450
PH50-1, 3	29½	36	58	49,500†	—	3.75	4	—	7.9/7.1	Finned Tube	—	Tecumseh	4	PFB400	11#	Cap.	—	1	1,800	½	—	—	600
PH62-1, 3	32	45	60	63,000†	—	4.50	4	—	9.0/7.9	Finned Tube	—	Tecumseh	5	PFB500	15#	Cap.	—	1	2,000	½	—	—	700
PH72S-1	23⅛	30	60	25,000†	40,000	2.0	4	—	3.5	Finned Tube	—	Tecumseh	2	B21U18	2#8	Cap.	—	—	—	—	—	—	—
PH87-1	29½	32	74	36,300†	60,000	3.0	4	—	5.7	Finned Tube	—	Tecumseh	3	PJE300	7#	Cap.	—	—	—	—	—	—	—
†Rated under ARI standard 210-58.																							
Arkla-Servel—Arkla Air Conditioning Corp., 812 Main St., Little Rock, Ark.																							
500	74⅛	54⅛	25⅛	42,000†	96,000	—	—	—	—	Shell & Tube	—	—		Absorption	Water	None	No	1	1,400	½	2	16x25x1	965
750	79⅛	62	25⅞	60,000†	96,000	—	—	—	—	Shell & Tube	—	—		Absorption	Water	None	No	1	2,000	½	4	16x25x1	1,165
750-H	79⅛	63¼	25⅞	60,000†	144,000	—	—	—	—	Shell & Tube	—	—		Absorption	Water	None	No	1	2,000	½	4	16x25x1	1,260
†Rated under ARI standard.																							
Atmos-Pak—Air Conditioning, Inc., 98 North Highland Ave., Ossining, N. Y.																							
RC-500	44‡	43‡	128‡	60,000	(1)	4.17	4	125	6.3	Finned Tube	—	Copeland	5	—	24#	X-Valve	—	1	2,000	¾	3	12x24x1	1,650
RC-750	48	60	150	90,000	(3)	6.25	4	135	7.3	Finned Tube	—	Copeland	7½	—	34#	X-Valve	—	1	3,000	¾	6	(3) 12x24x1, (3) 12x30¾x1	3,400
RC-1000B	55	60	191‡	120,000	(3)	8.34	4	180	10.7	Finned Tube	—	Copeland	10	—	25#	X-Valve	—	—	—	—	—	—	—
RC1000	48	60	168‡	134,000	(3)	8.34	4	250	11.6	Finned Tube	—	Copeland	10	—	26#	X-Valve	—	1	4,000	1	8	(4) 12x24x1, (4) 12x30¾x1	2,700
RC1500	49	60	186	180,000	(3)	11.2	4	270	14.1	Finned Tube	—	Copeland	15	—	49#	X-Valve	—	1	6,000	1½	8	(4) 12x30¾x1, (4) 12x24x1	3,500
RC1750	55	64	‡	210,000	(4)	14.3	4	350	18.7	Finned Tube	—	Copeland	20	—	55#	X-Valve	—	1	7,000	3	8	12x30¾x1	3,600
RC3000	55	88	198‡	341,000	(5)	14.9	4	260	21.3	Finned Tube	—	Copeland	30	—	80#	X-Valve	—	1	8,000	3	10	12x30¾x1	4,200
‡This dimension varies for different types of heating. (1) 100,000 on gas, 96,000 on oil, 115,000 on steam (5 lb). (3) 140,000 on gas and oil, 170,000 on steam. (5) 240,000 on gas and oil, 270,000 on steam.																							
Bar-Brook—Bar-Brook Mfg. Co., Inc., 6135 Linwood, Shreveport, La.																							
SC211B	21¼	27	40	24,000†	—	2.1	2	55.0	3.0	Finned Tube	—	Bendix-W.	2	H200	2#	Cap.	—	1	800	¼	1	25x17	330
SC311T	21⅛	57	37	36,000†	—	3.1	3	78.0	4.0	Finned Tube	—	Tecumseh	2	PJE300	5#13	Cap.	—	1	1,200	½	1	23x17	500
‡See specifications story.																							
Bonair—Peerless Products Co., 23rd & Sedgley Ave., Philadelphia 32, Pa.																							
PA23-A	23	30	30	23,000†	—	1.9	3	—	—	Finned Tube	—	Tecumseh	2	B21U18	2#1	Cap.	No	1	750	¼‡	—	—	345
PA30-A	26	33	50	32,000†	—	2.8	3	—	—	Finned Tube	—	Tecumseh	3	PJE300	5#3	Cap.	No	1	1,100	¼	—	—	405
PA40-A	26	33	50	40,000†	—	2.8	4	—	—	Finned Tube	—	Tecumseh	(2) 2	B21U18	5#14	Cap.	No	1	1,400	½	—	—	470
PA60-1	37	42	57½	58,000†	—	3.7	4	—	—	Finned Tube	—	Tecumseh	5	PFB500	9#9	Cap.	No	1	1,800	⅝	—	—	745
†Rated under ARI standard. ‡Common fan.																							
Brown—A. Brown Products Corp., 1980 Springfield Rd., Union, N. J.																							
*PA23-1	23	29¾	30¼	21,000†	—	1.9	3	—	3.3	Finned Tube	—	Tecumseh	2	B21U18	2#14	Cap.	No	1	750	¼‡	—	—	345
*PA30-1	26	33	43⅝	32,000†	—	2.8	3	—	4.5	Finned Tube	—	Tecumseh	3	PJE300	5#3	Cap.	No	1	1,200	¼	—	—	405
*PA40-1	26	33	49¾	40,000†	—	3.8	4	—	6.3	Finned Tube	—	Tecumseh	(2) 2	B21U18	5#13	Cap.	No	1	1,400	½	—	—	470
*PA60-1	37	42	57½	58,000†	—	3.7	4	—	7.83	Finned Tube	—	Tecumseh	5	PFB500	9#3	Cap.	No	1	1,800	⅝	—	—	745
†Rated under ARI standard. ‡With condenser blower motor.																

VIRGINIA Chemicals®

REFRIGERATION BULLETIN

"Helpful facts for the serviceman"

HOW TO INSULATE PIPES EASILY AND QUICKLY

Big advantages of preformed insulation

For new pipe lines and those already installed, preformed insulation offers valuable advantages. The most important are ease of installation and saving in labor. It can be applied in as little as half the time required for other types of pipe insulation. And it offers the added benefit of a smooth, finished appearance when applied.

Characteristics of VascoCel Insulation

Made of soft, highly resilient Neoprene, preformed VascoCel offers the surest, easiest way to stop condensation and sweating of air-conditioning and refrigeration equipment lines. Its light weight and flexibility make it unusually easy to handle and to apply.

Moisture-Proof—Its closed cellular structure provides an excellent barrier against moisture.

Insulates—It provides thermal insulation at temperatures from 0 to 220°F.

Nonabsorbent — An immersion test revealed absorption of only 7% by weight in 15 days! And its resistance to air penetration is 100% effective.

Durable—The resistance of VascoCel to penetration by air and water means unusually long service life—cuts maintenance costs on equipment.

Resists Oils, Ozone, Acids, Alkalis, Solvents—All have little effect on VascoCel, other than causing it to swell slightly.

Safe—It is self-flame-extinguishing and therefore incapable of conducting a flame, as from room to room.

VASCOCEL

SPECIFICATIONS

Wall Thicknesses	⅜ in., ½ in., ¾ in.
Density	7.88 lb. per cu. ft.
K factor* (120°F)	0.3[illegible]
Flammability	Self-flame-extinguishing
Average Water Absorption	7.21% weight gain
Average Air Transmission	0.00014 cu ft/hr/sq ft
Average Water Vapor Transmission	0.0583 perm† at [illegible]°F ambient and 75% relative humidity

*K Factor: Heat conductivity expressed in Btu/in. of material thickness/sq ft/°F difference/hr.

†Perm: A measure of vapor conductivity of ½ in. wall VascoCel expressed as grains of moisture/sq ft/hr/in. of mercury pressure difference.

Quick easy installation

For new tubing—VascoCel slides over new tubing or pipe like a sleeve. Fits snugly, even on bends up to 45°. For sharper angles it can be cut in a miter box and fitted onto the pipe. Sealing with VascoCel Adhesive produces a permanent, air and moisture-tight joint.

For installed tubing—Slit VascoCel lengthwise with a sharp knife or razor blade. Slip over and around the tubing and seal with adhesive.

NOTE: *When applying the adhesive* always *wait until the adhesive is nontacky to the touch before making the seal.*

HOW TO MAKE FITTINGS

Tools you need

- A miter box
- Suitable cutting blade (saw-edged bread-knife)
- Single-edge razor blade for slitting insulation
- Special adhesive (VascoCel Adhesive is recommended)
- Adhesive applicator (brush or slim piece of springy metal)

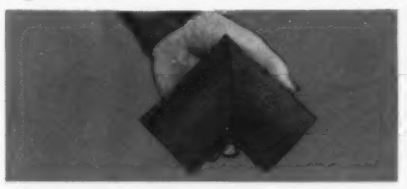
When cutting the insulation in the miter box, move the blade back and forth, letting the teeth do the work. Do not press heavily. This deforms the tubing and can cause an inaccurate cut.

The Tee

Cut 3 pieces of tubing. One takes a single 45° miter box cut. The other two require a double 45° cut each. Apply special cement to cross sections where they have been cut and fit together as shown in Fig. 1. Spread adhesive in a thin, even coating, covering all edges thoroughly. Allow to dry (nontacky to touch) before joining sections.

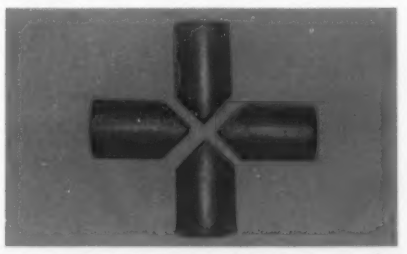
The Elbow

To make an elbow, use two sections, each with a single 45° cut. Apply adhesive and press firmly together, as in Fig. 2.



The Cross

Prepare four sections, each double-cut and join with adhesive as shown in Fig. 3.



See back page for full line of refrigeration products ▶

FOR TROUBLE-FREE MAINTENANCE USE "VIRGINIA" REFRIGERATION PRODUCTS

"Virginia" Scale & Corrosion Inhibitor

Reduces scale buildup sharply, keeping scale-forming solids in suspension or solution. Less scale, less labor, lower maintenance costs.

"Virginia" Liquid Scale Remover

Ideal for heavy scale. Dissolves 3 lb. of scale per gal. Works fast. Inhibited to prevent metal damage. (Anti-foam agent and test papers included with every container.) Light shatterproof throwaway container for easy handling and easy pouring.

"Virginia" Solid Scale Remover

Highly inhibited—safe for use on galvanized, dipped zinc and aluminum water-cooled equipment. Destroys algal growth. Contains 96% sulfamic acid.

"Virginia" Algae-Cides

Adaptable to the special use requirements in (1) towers, (2) evaps, (3) air washers, and (4) ice machines and drip pans. A new No. 4 high-potency formula kills the tough resistant types of algae.

Du Pont FREON* Refrigerants

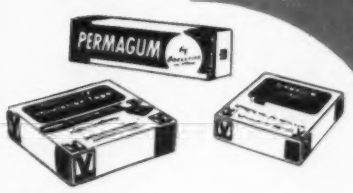
Nonflammable, nontoxic, stable, odorless

Best known for premium quality. Most widely used refrigerants in the industry. "Virginia" is the only national sales agent for Du Pont "Freon". F-11,* F-12,* F-13,* F-22,* F-113* and F-114* are available in cylinders of all popular sizes.

**Du Pont registered trade mark*

"Virginia" Ice Machine Cleaner

Eliminates slow freezing, bad taste and odor. Will not injure enamel or polished metal surfaces. Highly effective on automatic cube or flake ice machines.



Pressitite Insulation

Tape—ideal for stopping pipe drip. Adheres to any dry surface. *Permagum slugs*—seals seams, copper tube, BX and conduit entries against moisture. *Cords*—nonstaining, odorless, shaped for use on display cases, freezers, room coolers, etc.

VascoCel Insulation

Preformed of soft, durable, clean, odorless Neoprene. Cuts time and labor costs sharply. Closed-cell structure makes condensation impossible. Ozone, oil, acid, and fungus resistant. Application temperature range 0-220°F. Available in ⅜", ½" and ¾" wall thickness.

"Virginia" Degreasing Solvent

No. 10 has low toxicity, is noncorrosive and fast drying. High flashpoint of 154-160°F reduces fire hazard; dielectric strength 20,000 volts.

Ask about "Virginia" "Freon 11" Cleaning Solvent for motor burnouts.

"Suniso" Refrigeration Oils

G Oils are improved for greater stability and lower waxing point. Available in 3G-150 SSU, 4G-300 SSU, and 5G-500 SSU. Dual Inhibited oils have same low wax point, resist breakdown and copper-plating even more effectively.

Can-O-Gas® Packaged Refrigerants

Throwaway cans—full line in screw-top or clip-top cans. Wide variety of preweighed charges, accurate to ±4 grams. Selection of Freon* gases, sulfur dioxide, and methyl chloride.

Carried by wholesalers everywhere. Order from one nearest you or contact Refrigeration Division, VIRGINIA SMELTING COMPANY, West Norfolk, Va.
Available in Canada and many other countries

"Virginia" is the only national sales agent and authorized repacker for Du Pont's "Freon" Refrigerants.

D77 Form 523

Printed in U.S.A.

Packaged Air Conditioners

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (Btuh) Cooling	Heating	Evaporator Face Area (Sq Ft)	Evaporator Rows Deep	Locked Rotor Amps	Kw Input Total	Condenser Type	Condenser Water Usage Gpm/Ton	Compressor Make	Compressor Hp	Compressor Comp. Mfrs. Model No.	Refrigerant Charge (Lbs)	Refrigerant Control	Damper Control	Blowers No.	Blowers Cfm	Blowers Motor Hp	Air Filter No.	Air Filter Dimensions	Net Weight (Lbs)
Capitolaire—Crane Co., Miami, Okla.																							
PA3-02	57 ‡	40	34	35,000†	106,500	3.5	3	78/68	—	Finned Tube	—	Tecumseh	3	JE300	9	X-Valve	No	1	1,200	½	2	16x30x1, 20x20x1	570
PA3-05	57 ‡	40	34	57,000†	143,500	4.6	3	125/90	—	Finned Tube	—	Tecumseh	5	FB500	15	X-Valve	No	1	2,000	½	2	16x30x1, 20x20x1	620
PA3-08	90⅝‡	55½	29½	84,000†	242,500	8.55	3	135	—	Finned Tube	—	Copeland	7½	MRG750	23	X-Valve	No	2	3,000	¾	3	16x25x1	950
PA3-10	90⅝‡	55½	29½	111,000†	285,000	8.55	4	180	—	Finned Tube	—	Copeland	10	9RS-1000	30	X-Valve	No	2	4,000	1½	2	16x25x1	1,170
PA3-15	97⅝‡	86	30½	168,000	492,000	15.9	3	135 ea.	—	Finned Tube	—	Copeland	(2) 7½	MRG-750	(2) 23	X-Valve	No	2	6,000	2	4	20x25x1	1,940
PA3-20	97⅝‡	86	30½	222,000	574,000	15.9	4	180 ea.	—	Finned Tube	—	Copeland	(2) 10	9RS-1000	(2) 30	X-Valve	No	2	8,000	3	4	20x25x1	2,100
PA3-28	96⅛‡	94	30½	285,000	715,000	19.25	4	180/250**	—	Finned Tube	—	Copeland	10/17½	9RS-1000, 4R48-1500	—	X-Valve	No	2	10,000	3	6	P ‡	2,700
PA3-35	96⅛‡	94	30½	341,000	857,000	23.00	4	250 ea.	—	Finned Tube	—	Copeland	(2) 17½	4R48-1500, 9RS-1000	—	X-Valve	No	2	12,000	5	—	—	2,900
PW3-02	57 ‡	40	34	38,000†	106,500	3.5	3	78/68	—	Shell & Coil	3	Tecumseh	3	JE300	4	X-Valve	No	1	1,200	½	2	16x30x1, 20x20x1	610
PW3-05	57 ‡	40	34	61,000†	143,500	4.6	3	125/90	—	Shell & Coil	3	Tecumseh	5	FB500	9	X-Valve	No	1	2,000	½	2	16x30x1, 20x20x1	670
PW3-08	90⅝‡	55½	29½	90,000†	242,500	8.55	3	135	—	Shell & Coil	3	Copeland	7½	MRG750	12	X-Valve	No	2	3,000	¾	3	16x25x1	1,040
PW3-10	90⅝‡	55½	29½	120,000†	285,000	8.55	4	180	—	Shell & Tube	3	Copeland	10	9RS-1000	14	X-Valve	No	2	4,000	1½	3	16x25x1	1,240
PW3-15	97⅝‡	86	30½	180,000	492,000	15.9	3	135 ea.	—	Shell & Coil	3	Copeland	(2) 7½	MRG750	(2) 12	X-Valve	No	2	6,000	2	4	20x25x1	2,040
PW3-20	97⅝‡	86	30½	240,000	574,000	15.9	4	180 ea.	—	Shell & Tube	3	Copeland	(2) 10	9RS-1000	(2) 14	X-Valve	No	2	8,000	3	4	20x25x1	2,200
PW3-28	96⅛‡	94	30½	306,000	715,000	19.25	4	180/250**	—	Shell & Tube	3	Copeland	10/17½	9RS-1000, 4R48-1500	16/20	X-Valve	No	2	10,000	3	6	P ‡	3,200
PW3-35	96⅛‡	94	30½	367,000	857,000	23.00	4	250 ea.	—	Shell & Tube	3	Copeland	(2) 17½	4R48-1500	(2) 20	X-Valve	No	2	12,000	5	—	—	3,400
PA-22	29	29½	30½	21,000†	—	1.9	3	—	3.3	Finned Tube	—	Tecumseh	2	B21U18	—	Cap.	No	1	750	¾	—	—	245
PA-30	36	32	49¾	32,000†	—	2.8	3	—	4.5	Finned Tube	—	Tecumseh	3	PJE300	5.0	Cap.	No	1	1,200	¾	—	—	405
PA-40	36	32	49¾	40,000†	—	2.8	4	—	6.3	Finned Tube	—	Tecumseh	(2) 3	B21U18	6.0	Cap.	No	1	1,400	¾	—	—	470
PA-60	57	42	57½	55,000†	—	3.7	4	—	7.82	Finned Tube	—	Tecumseh	5	PFB500	9.0	Cap.	No	1	1,800	¾	—	—	745
CEN-1W-A8H	58⅝‡	53¼	35¼	90,000†	214,000	6.0	4	35	—	Shell & Tube	3	Copeland	7½	MRG750	15	X-Valve	No	1	3,000	1	—	†	1,600
CEN-1W-A10H	67⅝‡	70¼	41¼	120,300†	285,000	8.0	4	35	—	Shell & Tube	3	Copeland	10	9RS-1000	19	X-Valve	No	2	4,000	1½	—	†	1,800
CEN-1W-B15H	73⅝‡	73¼	41¼	180,000	427,000	12.0	4	45	—	Shell & Tube	3	Copeland	(2) 7½	MRG750	(2) 15	X-Valve	No	2	6,000	2	—	†	2,000
CEN-1W-B20H	82⅝‡	87¼	51¼	247,800	574,000	16.0	4	60	—	Shell & Tube	3	Copeland	(2) 10	9RS-1000	(2) 18	X-Valve	No	2	8,000	3	—	†	2,900
CEN-1W-C25H	82⅝‡	87¼	51¼	189,100	715,000	19.2	4	60	—	Shell & Tube	3	Copeland	(3)7½/10	MRG750, 9RS-1000	(3)15/18	X-Valve	No	3	10,000	3	—	†	3,600
CEN-1W-C30H	87⅝‡	95¼	55¼	371,700	857,000	23.0	4	90	—	Shell & Tube	3	Copeland	(3) 10	9RS-1000	(3) 18	X-Valve	No	3	12,000	5	—	†	4,000
CEN-1W-D40H	92⅝‡	103¼	59¾	495,600	1,143,000	30.6	4	90	—	Shell & Tube	3	Copeland	(4) 10	9RS-1000	(4) 18	X-Valve	No	3	16,000	5	—	†	4,800
CEN-1W-D50H	98⅝‡	134¼	59¾	619,500	1,431,000	39.3	4	120	—	Shell & Tube	3	Copeland	(3)10, (3)15	9RS-1000, 4R48-1500	2)23/2)40	X-Valve	No	3	20,000	7½	—	†	5,600
CEN-1W-D60H	101⅝‡	139¼	63¾	722,000	1,718,000	47.3	4	††	—	Shell & Tube	3	Copeland	(4) 15	4R48-1500	(4) 40	X-Valve	No	3	24,000	10	—	†	6,700

‡With plenum. †Rated under ARI standard. ‡Two each 20x20x2, 20x25x2, 16x25x2, 16x30x2. §Optional high or low velocity, permanent or throwaway. CEN 8-60 ton models also available with integral matching evaporative condensers as CEN-1E models. Weight of PA3 models is for air conditioning unit only. **Three-phase each compressor. ††Two compressors 180, 2—250.

Carrier Weathermaker—Carrier Air Conditioning Co., Carrier Pkwy., Syracuse, N. Y.																							
*50R4	53	36	28¼	29,000†	86,000	4.6	2	—	—	Shell & Tube	—	Carrier	3	6D28	6‡8	X-Valve	—	1	1,200	½	2	16x30x1		500
*50R6	64	43	34½	42,000†	148,000	6.6	2	—	—	Shell & Tube	—	Carrier	5	6D44	9‡4‡	X-Valve	—	1	2,000	½	2	16x25x1		700
50EK8	77	48	30¼	92,000†	150,000	9.1	3	—	—	Shell & Tube	—	Carrier	7½	6D48	14‡8	X-Valve	—	1	3,000	1	4	(2) 16x25x1, (2) 16x30x1		1,040
50EK12	64	82	22¼	126,000†	209,000	12.4	3	—	—	Shell & Tube	—	Carrier	10	6D68	17‡	X-Valve	—	2	4,000	2	4	20x25x1		1,270
50EK12	64	82	22¼	126,000†	209,000	12.4	3	—	—	Shell & Tube	—	Carrier	(2) 5	6D45	25‡	X-Valve	—	2	4,000	2	4	20x25x1		—
50EK16	82⅝	82	30¼	189,000	314,000	18.7	3	—	—	Shell & Tube	—	Carrier	15	6D75	34‡	X-Valve	—	2	6,000	3	6	(4) 16x20x1, (4) 30x30x1		1,600
50EK16	82⅝	82	30¼	194,000	314,000	18.7	3	—	—	Shell & Tube	—	Carrier	(3) 7½	6D48	29‡	X-Valve	—	2	6,000	3	6	(4) 16x30x1, (4) 30x30x1		2,280
50BA024	83¼	80	29¼	253,000	505,000	18.0	4	—	—	Shell & Tube	—	Carrier	—	(2) 6D68	34‡	X-Valve	—	2	8,000	3	6	P (3) 16x35x1, (3) 30x25x1		1,980
41EZ8	96¾	93¼	35¼	311,000	680,000	22.6	4	—	—	Shell & Tube	—	Carrier	10, 15	6D68, 6D75	41‡	X-Valve	—	2	10,000	5	8	P 20x20x2		3,620
41EZ4	96¾	93¼	35¼	373,000	764,000	26.9	4	—	—	Shell & Tube	—	Carrier	(2) 15	6D75	48‡	X-Valve	—	2	12,000	5	8	P (6) 25x30x2, (2) 16x30x2		3,750
41EE044	106	126⅝	46¼	487,000	1,385,000	35.5	4	—	—	Shell & Tube	—	Carrier	(2) 15, 10	(2) 6D75, 6D68	24, 24, 17	X-Valve	—	3	16,000	7½	13	P (6) 30x30x2, (4) 30x30x2		3,800
41EE054	117	126⅝	46¼	614,000	1,620,000	46.2	4	—	—	Shell & Tube	—	Carrier	(3) 15	(3) 6D75	2), 29, 25	X-Valve	—	3	20,000	10	15	P (10) 20x25x2, (5) 16x25x2		4,100
*50DA002	21¾	37¾	30¼	23,000†	—	2.08	3	—	—	Plate Fin	—	Carrier	2	6A25	3‡9‡	Cap.	—	1	800	½	1	16x35x1		285
*50DA004	34	51¼	35	38,000†	—	3.18	3	—	—	Plate Fin	—	Carrier	3	6A35	6‡1	Cap.	—	1	1,200	½	1	16x32x1		385
*63E5	29	40¼	53¼	54,000†	—	4.43	3	—	—	Plate Fin	—	Carrier	5	6D44	11‡1	X-Valve	—	1	1,600	½	2	20x30x3		650
*63E8	29	40¼	53¼	59,000†	—	4.43	3	—	—	Plate Fin	—	Carrier	5	6D48	13‡8‡	X-Valve	—	1	1,600	½	2	20x30x3		655
48J8(r)	50	72	150	92,000†	160,000	7.9	3	—	—	Plate Fin	—	Carrier	7½	6D73	39‡1	X-Valve	—	2	3,000	1	4	(2) 16x30x1, (2) 16x25x1		2,300
48H12(r)	50	72	181	125,000†	200,000	10.7	3	—	—	Plate Fin	—	Carrier	10	6D73	42‡1	X-Valve	—	2	4,000	2	6	16x30x1		2,700
50AA008(r)	50	72	102	92,000†	—	7.9	3	—	—	Plate Fin	—	Carrier	7½	6D73	35‡1	X-Valve	—	2	3,000	1	4	(2) 16x30x1, (2) 16x25x1		1,600
50AA013(r)	50	72	102	125,000†	—	10.7	3	—	—	Plate Fin	—	Carrier	10	6D73	43‡1	X-Valve	—	2	4,000	2	6	16x30x1		1,800
50R6	64	43	34½	59,000†	148,000	6.6	2	—	—	Plate Fin	—	Carrier	5	6D44	—	X-Valve	—	1	2,000	½	2	16x35x1, 20x35x1		900
50K8	77	48	30¼	88,000†	150,000	9.1	3	—	—	Plate Fin	—	Carrier	7½	6D48	—	X-Valve	—	1	3,000	1	4	(3) 16x35x1, (2) 16x20x1		1,350
50K12	64	82	22¼	120,000†	209,000	12.4	3	—	—	Plate Fin	—	Carrier	10	6D68	—	X-Valve	—	2	4,000	2	4	20x35x1		1,800
50K16	82⅝	82	30¼	179,000	314,000	18.7	3	—	—	Plate Fin	—	Carrier	15	6D75	—	X-Valve	—	2	6,000	3	6	(4) 16x20x1, (4) 30x30x1		2,500
50BB024	—	—	—	—	—	18.0	4	—	—	Plate Fin	—	Carrier	(2) 10	(2) 6D68	—	X-Valve	—	2	8,000	3	6	P (3) 16x35x1, (3) 30x25x1		1,450
41EZ8	96¾	93¼	35¼	301,000	680,000	22.6	4	—	—	Plate Fin	—	Carrier	10, 15	6D68, 6D75	—	X-Valve	—	2	10,000	5	8	P 20x30x2		3,800
41EZ4	96¾	93¼	35¼	362,000	764,000	22.6	4	—	—	Plate Fin	—	Carrier	(3) 15	6D75	—	X-Valve	—	2	12,000	5	8	P (6) 25x30x3, (2) 16x30x2		3,900
41EG044	106	126⅝	46¼	487,000	1,385,000	36.5	4	—	—	Plate Fin	—	Carrier	(2) 15, 10	(2) 6D75, (1) 6D68	—	X-Valve	—	2	16,000	7½	12	P (6) 20x35x3, (6) 20x30x2		—
41EG054	117	126⅝	46¼	565,000	1,620,000	46.2	4	—	—	Plate Fin	—	Carrier	(3) 15	6D75	—	X-Valve	—	3	20,000	10	15	P (10) 20x25x3, (5) 16x25x3		—

†Rated under ARI standard. (r)—rooftop. ‡R-500 §R-12.

Climate Changer—The Trane Co., La Crosse, Wis.																							
SC3	42	32	22½	29,000†	—	2.40	2	68‡	—	Co-Axial	—	Tecumseh	3	—	4‡	X-Valve	No	1	1,200	½	1	16x25x1		500
SC5	66	36½	24	61,000†	—	3.94	2	90‡	—	Co-Axial	—	Tec. & Trane	5	—	6‡	X-Valve	No	1	2,000	¾	2	16x20x1		650
SC7	77	41	29	88,000†	—	5.44	2	125‡	—	Co-Axial	—	Cop. & Trane	7½	—	8‡	X-Valve	No	1	3,000	1½	3	18x25x1		950
SC10	72	72	24	121,000†	—	7.52	2	180‡	—	Co-Axial	—	Tec. & Trane	(2) 5	—	12‡	X-Valve	No	2	4,000	2	4	18x25x1		1,350
SC15	81	77	29	178,000	—	10.88	2	270‡	—	Co-Axial	—	Cop. & Trane	(2) 7½	—	16‡	X-Valve	No	2	6,000	3	4	18x25x1		1,850
SC20	66½	73	41½	245,000	—	15.7	2	210‡	—	Shell & Tube	—	Trane	20	—	40‡	X-Valve	Opt.	2	8,000	3	7	16x20x2		2,600
SC25	66½	89	41½	306,000	—	19.7	2	270‡	—	Shell & Tube	—	Trane	25	—	45‡	X-Valve	Opt.	2	10,000	5	9	16x20x2		3,000
SC30	66½	109	41½	367,000	—	24.0	2	318‡	—	Shell & Tube	—	Trane	30	—	50‡	X-Valve	Opt.	2	12,000	5	11	16x30x2		3,200
SC40	81½	109	43½	490,000	—	32.0	2	380‡	—	Shell & Tube	—	Trane	40	—	60‡	X-Valve	Opt.	2	16,000	7½	15	16x30x2		4,000
SC50	84½	119	49½	602,000	—	39.8	2	525‡	—	Shell & Tube	—	Trane	50	—	75‡	X-Valve	Opt.	2	20,000	7½	19	16x30x2		5,300
SA3	42	32	22½	31,000†	—	2.40	2	68‡	—	Finned Tube	—	Tecumseh	3	—	Holding	X-Valve	No	1	1,200	½	1	16x25x1		500
SA5	66	36½	24	53,000†	—	3.94	2	90‡	—	Finned Tube	—	Tec. & Trane	5	—	Holding	X-Valve	No	1	2,000	¾	2	16x20x1		650
SA7	77	41	29	75,000†	—	5.44	2	125‡	—	Finned Tube	—	Cop. & Trane	7½	—	Holding	X-Valve	No	1	3,000	1½	3	18x25x1		950
SA10	72	72	24	106,000†	—	7.52	2	180‡	—	Finned Tube	—	Tec. & Trane	(2) 5	—	Holding	X-Valve	No	2	4,000	2	4	16x20x1		1,350
SA15	81	77	29	150,000	—	10.88	2	270‡	—	Finned Tube	—	Cop. & Trane	(2) 7½	—	Holding	X-Valve	No	2	6,000	3	4	18x25x1		1,850
SA20	66½	73	41½	221,000	—	15.7	2	210‡	—	Finned Tube	—	Trane	20	—	Holding	X-Valve	Opt.	2	8,000	3	7	16x20x2		2,300
SA25	66½	89	41½	271,000	—	19.7	2	271‡	—	Finned Tube	—	Trane	25	—	Holding	X-Valve	Opt.	2	10,000	5	9	16x20x2		2,600
SA30	66½	109	41½	322,000	—	24.0	2	318‡	—	Finned Tube	—	Trane	30	—	Holding	X-Valve	Opt.	2	12,000	5	11	16x30x2		2,900
SA40	81½	109	43½	427,000	—	32.0	2	380‡	—	Finned Tube	—	Trane	40	—	Holding	X-Valve	Opt.	2	16,000	7½	15	16x30x2		3,500
SA50	84½	119	49½	542,000	—	39.8	2	525‡	—	Finned Tube	—	Trane	50	—	Holding	X-Valve	Opt.	2	20,000	7½	19	16x30x2		4,300
10SSCE	61⅞	109¾	25¼	127,000	—	6.67	5	178‡	—	Evaporative	—	Trane	10	—	50‡	X-Valve	Opt.	3	4,000	(2) 1½	3	16x30x2		2,600
15SSCE	68⅝	117¾	37¾	191,000	—	10.0	5	220‡	—	Evaporative	—	Trane	15	—	90‡	X-Valve	Opt.	3	6,000	(3) 1½	3	20x25x2		3,600
20SSCE	71⅞	121¾	40¼	252,000	—	13.3	5	290‡	—	Evaporative	—	Trane	20	—	90‡	X-Valve	Opt.	3	8,000	(3) 2	6	16x30x2		4,000

†Rated under ARI standard. Heating optional. ‡For 208/230/60/3 compressor.

Comfort-Aire—Heat Controller, Inc., 1900 Wellworth Ave., Jackson, Mich.																							
*W-2502	36¼	18½	35	19,700†	—	1.2	4	53.6	2.7	Finned Tube	—	Tecumseh	2	B21T18	2‡2	Cap.	Yes	1	540	¼	1	P 21x10		255
*PA22-A	23	29½	30¼	22,000†	—	1.9	3	64.6	3.3	Finned Tube	—	Tecumseh	2	B21U18	3‡3	Cap.	No	1	760	½	—	—		345
*PA30-A	28	32	49¾	32,000†	—	2.8	3	89.1	4.7	Finned Tube	—	Tecumseh	3	PJE300	5‡3	Cap.	No	1	1,100	¾	—	—		495
*PA40-A	36	32	49¾	40,000†	—	2.8	4	73.5	6.2	Finned Tube	—	Tecumseh	(2) 2	B21U18	5‡13	Cap.	No	1	1,400	¾	—	—		470
*PA60-1(3)	37	42	57½	58,000†	—	3.7	4	146.3	7.8	Finned Tube	—	Tecumseh	5	PFB500	9‡6	Cap.	No	1	1,800	½	—	—		745

†Rated under ARI standard.

Condaire—The Williamson Co., 3500 Madison Rd., Oakley, Cincinnati 9, Ohio																							
6128-02	23½	31	50	24,000	—	1.9	4	—	—	Finned Tube	—	Bendix-W.	2	H400TA	3‡10	Cap.	No	1	800	—	—	—		420
6128-03	28	38	55	36,000	—	2.5	4	—	—	Finned Tube	—	Tecumseh	3	JE300	5‡3	Cap.	No	1	1,200	—	—	—		600

Continental—International Metal Products Div., McGraw-Edison Co., 500 South 15th St., Phoenix, Ariz.																							
PH2-1	23½	29½	33¾	25,000†	—	2.0	3	—	3.5	Finned Tube	—	Tecumseh	3	B21U18	3‡8	Cap.	No	1	950	½	None Furnished			220
PH3-1, 3	29	33¾	48¼	37,000†	—	3.0	4	—	5.7	Finned Tube	—	Tecumseh	3	PJE300	7‡	Cap.	—	1	1,400	¾	—	—		450
PH4-1, 3	30	34¾	55¾	50,000†	—	3.5	4	—	7.8	Finned Tube	—	Tecumseh	4	PFB400	11‡	Cap.	—	1	1,600	½	—	—		600
PH5-1, 3	32	45¾	60¼	64,000†	—	4.5	4	—	7.9	Finned Tube	—	Tecumseh	5	PFB500	17‡	Cap.	—	1	2,000	½	—	—		700
PHF2-1	23¾	30	60	25,000†	40,000	2.0	4	—	3.5	Finned Tube	—	Tecumseh	2	B21U18	3‡8	Cap.	—	—	—	—	—	—		—
PHF3-1	29½	32	74	36,300†	60,000	3.0	4	—	5.7	Finned Tube	—	Tecumseh	3	PJE300	7‡	Cap.	—	—	—	—	—	—		—

†Rated under ARI standard.

Coolerator—Albion Div., McGraw-Edison Co., 704 N. Clark St., Albion, Mich.																							
*H2A21	17⅝	26	36	21,000†	—	1.5	4	45.5	3.23	Finned Tube	—	Tecumseh	2	B21U18	2.46	Cap.	No	1	800	¼	—	—		—
*H3A21	23⅞	30½	53½	30,000†	—	2.5	3	86.1	4.3	Finned Tube	—	Tecumseh	3	PJG300	5.5	Cap.	No	1	1,250	¼	—	—		—
*H4A21	26½	36⅜	48¼	40,000†	—	3.13	5	129	6.16	Finned Tube	—	Tecumseh	(2) 2	B21U18	6.1	Cap.	No	2	1,625	½/½	—	—		—

†Rated under ARI standard 210-58.

Cool-ette, Liquid-Ice, Ranch-Aire—Cool-ette, Inc., 7535 W. Eight Mile Rd., Detroit 21, Mich.																							
SC2W	70¼	25	21½	24,750†	—	2.2	4	—	2.9	Co-Axial	1.5	Tecumseh	2	JE200	2‡11	Cap.	Yes	1	800	¼	1	P 20x20x1		—
SC3W	70¼	25	21½	36,450†	—	2.92	4	—	3.4	Co-Axial	1.5	Tecumseh	3	JE300	2‡15	Cap.	Yes	1	1,200	½	1	P 20x20x1		—
SC5W	80¼	35	25	65,800†	—	4.2	4	—	5.5	Co-Axial	1.5	Tecumseh	5	FB500	2‡4	Cap.	Yes	1	2,000	½	2	P 16x25x1		—
F2W	57½	25	21½	24,750†	—	2.2	4	—	2.9	Co-Axial	1.5	Tecumseh	2	JB200	2‡11	X-Valve	Yes	1	800	¼	1	P 20x20x1		450
F3W	57½	25	21½	36,450†	—	2.92	4	—	3.4	Co-Axial	1.5	Tecumseh	3	JE300	2‡15	X-Valve	Yes	1	1,200	½	1	P 20x20x1		510
F5W	66½	35	25	65,800†	—	4.2	4	—	5.5	Co-Axial	1.5	Tecumseh	5	FB500	2‡11	X-Valve	Yes	1	2,000	½	2	P 16x25x1		790
*RV2W	40½	35	21½	24,750†	—	2.2	4	—	2.9	Co-Axial	1.5	Tecumseh	2	JB200	2‡11	X-Valve	—	—	—	—	1	P 20x20x1		—
*RV3W	40½	35	21½	36,450†	—	2.92	4	—	3.4	Co-Axial	1.5	Tecumseh	3	JB300	2‡11	X-Valve	—	—	—	—	1	P 20x20x1		—
*RV5W	66½	35	25	65,800†	—	4.2	4	—	5.5	Co-Axial	1.5	Tecumseh	5	FB500	5‡4	X-Valve	—	—	—	—	2	P 16x25x1		—
*175AH	25	30¼	49¼	19,250†	—	2.2	4	—	—	Finned Tube	—	Tecumseh	2	JB200	4‡8	X-Valve	—	1	750	—	—	—		240
*200AH	28	30¼	49¼	24,000‡	—	3.06	4	—	—	Finned Tube	—	Tecumseh	3	JE300	5‡14	X-Valve	—	1	1,200	—	—	—		290

†Capacities based on 80°F db, 60° wb entering air, condenser water entering at 75°, leaving at 85°. ‡Based on 95° ambient temperature.

Coolpak—Century Engineering Corp., 221 Fourth Ave. S.E., Cedar Rapids, Iowa																							
A-301	34¾	31	41	34,000†	—	3.75	2	16.3	—	Finned Tube	—	Tecumseh	2	—	3‡13	Cap.	—	1	880	1/10	—	—		340
A-301	28	34	47	36,000†	—	4.5	3	28.7	—	Finned Tube	—	Tecumseh	3	—	3‡3	Cap.	—	1	1,200	⅛	—	—		395

†Rated under ARI standard.

Corsaire—Rheem Mfg. Co., 7600 S. Kedzie, Chicago 52, Ill.																							
*SC-23	27½	31⅝	43½	23,000†	—	2.44	3	62.4	3.27	Finned Tube	—	Tecumseh	2	B21U18	3‡8	Cap.	No	1	825	¼	Not Supplied			252
*SC-34	27½	31⅝	43¾	34,000†	—	2.44	4	86.0	4.7	Finned Tube	—	Tecumseh	3	PJE300	6‡	Cap.	No	1	1,100	¼	Not Supplied			305
*PB 23-1	37	31⅝	47¾	23,000†	—	5.75	2	58.7	3.27	Finned Tube	—	Tecumseh	2	B21U18	3‡	Cap.	No	—	800	—	Not Supplied			280
PB 23-3	37	31⅝	49

Packaged Air Conditioners

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (Btuh) Cooling	Heating	Evaporator Face Area (Sq Ft)	Rows Deep	Locked Rotor Amps	Kw Input Total	Condenser Type	Water Usage Gpm/Ton	Compressor Make	Hp	Comp. Mfrs. Model No.	Refrigerant Charge (Lbs)	Control	Damper Control	Blowers No.	Cfm	Motor Hp	Air Filter No.	Dimensions	Net Weight (Lbs)
Dunham-Bush—Dunham-Bush, Inc., 179 South St., West Hartford, Conn.																							
PAC-10	73	66	37	120,100	288,000	7.5	2	138	12.7	Shell & Tube	1.5/3‡	Brunner	10	100PHF	25#	X-Valve	No	2	4,000	1½	2	P 21x27x2	1,900
PAC-15	73	76	30	180,500	575,000	11.6	2	215	19.1	Shell & Tube	1.5/3‡	Brunner	15	150PHF	43#	X-Valve	No	2	6,000	2	3	P 21x27x2	1,800
PAC-20	84	76	36	241,000	700,000	14.2	2	138	25.7	Shell & Tube	1.5/3‡	Brunner	(2) 10	100PHF	50#	X-Valve	No	2	8,000	3	3	P 21x33x2	2,160
PAC-25	88	86	36	300,600	865,000	18.2	2	138	33.4	Shell & Tube	1.5/3‡	Brunner	10/15	100PHF, 150PHF	70#	X-Valve	No	2	10,000	5	6	P 18x24x2	2,520
PAC-30	94	100	40	361,000	1,000,000	19.3	4	215	99.3	Shell & Tube	1.5/3‡	Brunner	(2) 15	150PHF	86#	X-Valve	No	3	12,000	5	8	P 18x22x3	2,880
RMC-500	65¾	153¼	48	65,000†	180,000	4.45	2	70	6.7	Finned Tube	...	Brunner	6	50HF	20#	X-Valve	Yes	1	2,000	¾	4	16x30x2	2,200
RMC-750	65¾	153¼	48	85,000†	260,000	6.68	2	90	9.9	Finned Tube	...	Brunner	7½	75HF	30#	X-Valve	Yes	1	3,000	1	4	16x30x2	2,400
RMC-1000	65¾	165¾	60	113,000†	360,000	8.21	2	138	13.5	Finned Tube	...	Brunner	10	100PHF	30#	X-Valve	Yes	1	4,000	1½	6	(3) 20x30x2, (3) 15x30x2	3,600
RCM-1250	67⅛	174¼	60	150,000	300,000	8.21	2	153	17.0	Finned Tube	...	Brunner	15	150PHF	36#	X-Valve	Yes	1	4,800	3	6	(3) 20x30x2, (3) 15x30x2	3,600

†Rated under ARI standard. ‡City water/cooling tower.

Floatingair—Friedrich Refrigerators, Inc., 1117 East Commerce, San Antonio, Texas																							
*S-301	28¼	28	31¼	34,900†	...	1.89	5	55	3.08	Finned Tube	...	Tecumseh	2	B21U18	3#8	Cap.	No	1	705	⅓	...	...	369

†Rated under ARI standard.

Forston & Lincoln—The Forston Co., 2117-19 Judiway St., Houston 18, Texas																							
PKRC-2	21	36	39½	23,500†	...	1.69	4	55/...	2.55	Finned Tube	...	R-W/Tec.	2	H490TA, B21U18	2#8	Cap.	...	1	800	¼	1	Variable	350
PKRC-3	25½	33½	47½	31,000†	...	2.25	4	74/80‡	3.50	Finned Tube	...	Tecumseh	3	JE300	4#12	Cap.	...	1	1,200	¼	1	Variable	475
PKRC-4	31¼	37	60½	40,000†	...	4.34	4	110/78‡	4.9	Finned Tube	...	Tecumseh	4	FFB400	5#8	Cap.	...	1	1,600	¼	1	Variable	550
PKRC-5	31¼	37	68	62,600†	...	4.34	4	127/108‡	6.9	Finned Tube	...	Tecumseh	5	FB500	10#	Cap.	...	1	2,000	½	1	Variable	900
PEC-2	25½	33½	47½	25,500†	...	2.25	4	55/...	2.53	Finned Tube	...	Tecumseh	2	H90TA	3#13	Cap.	...	1	800	¼	1	Variable	375
PEC-3	25½	33½	47½	36,000†	...	2.25	4	78/78‡	3.80	Finned Tube	...	Tecumseh	3	PJE300	5#8	Cap.	...	1	1,200	⅓	1	Variable	480
PEC-4	31¼	41	68¼	52,200†	...	4.34	4	110/78‡	4.90	Finned Tube	...	Tecumseh	4	FFB400	5#	Cap.	...	1	1,600	½	1	Variable	900
PEC-5	31¼	41	68¼	62,600†	...	4.34	4	127/108‡	6.9	Finned Tube	...	Tecumseh	5	FB500	9#8	Cap.	...	1	2,000	½	1	Variable	950
5-PKGC	41⅛	43½	77⅛	63,800†	...	5.30	3	127/108‡	6.60	Finned Tube	...	Tecumseh	5	FFB500	10#8	X-Valve	...	1	2,260	½	1	Variable	990
7½-PKGC	41⅛	43½	77⅛	83,700†	...	5.30	4	125/67‡	7.96	Finned Tube	...	Copeland	7½	MRG751	14#	X-Valve	...	1	3,200	¾	1	Variable	1,130
10-PKGC	56	49½	90⅛	116,800†	...	7.5	4	180/80‡	10.14	Finned Tube	...	Copeland	10	9R8-1000	22#	X-Valve	...	1	4,500	1	1	Variable	1,400
15-PKGC	51	127	54⅛	185,000	...	11.68	4	250/125‡	18.45	Finned Tube	...	Copeland	20	4R48-3006	34#8	X-Valve	...	1	6,000	1	1	Variable	1,800
20-PKGC	60	128	54⅛	222,000	...	17.39	4	250/125‡	22.01	Finned Tube	...	Copeland	20	4R48-3006	43#	X-Valve	...	1	8,000	1½	1	Variable	2,400
30-PKGC	...	...	...	333,000	...	22.30	4	392/196‡	34.42	Finned Tube	...	Copeland	30	6R48-3006	67#	X-Valve	...	2	12,000	(2) 1	1	Variable	2,600

†Rated under ARI standard. ‡Compressor locked rotor amps at 230/220. ¶At 220/440.

Gaffers & Sattler—Utility Appliance Corp., 8111 W. Beverly Blvd., Los Angeles 48, Calif.																							
2TP	24⅛	28	45⅜	24,000†	...	2.33	3	53.6	3.05	Finned Tube	...	Tecumseh	2	...	4.5	Cap.	No	1	900‡	¼	...	...	312
3TP-1, 2	24⅛	36	45⅜	36,000†	...	3.67	4	78/75	4.6	Finned Tube	...	Tecumseh	3	...	5.5	Cap.	No	2	1,500‡	⅓	...	...	484

†Rated under ARI standard. ‡At .10 s.p.

General Electric—General Electric Co., Troup Hwy., Tyler, Texas																							
*TC24F	21⅛	32	44	23,000†	...	1.91	3	68.9/...¶	3.50	Finned Tube	...	G-E	2	...	4#10	Cap.	No	1	900	¼	...	...	300
*TC30F	25⅛	32	44	30,000†	...	2.62	3	92.4/...¶	4.57	Finned Tube	...	G-E	3	...	6#8	Cap.	No	1	900	¼	...	...	326
*TC36F	25⅛	32	44	36,000†	...	2.62	3	111.8/97.8¶	5.60	Finned Tube	...	G-E	4	...	7#	Cap.	No	1	1,200	¼	...	...	350

†Rated under ARI standard 210-58. ¶Single-phase/three-phase.

Gordon—Roberts-Gordon Appliance Corp., 44 Central Ave., Buffalo 6, N. Y.																							
*W-2502	26⅛	18⅛	35	19,700†	...	1.3	4	53.6	2.7	Finned Tube	...	Tecumseh	2	B21T18	2#3	Cap.	No	1	470	⅛	1	P 21⅛x3¼	255
*PA22-A	23	29⅞	30¼	22,000†	...	1.9	3	64.6	3.3	Finned Tube	...	Tecumseh	2	B21U18	3#3	Cap.	No	1	750	⅛	...	...	345
*PA30-A	26	32	49¾	32,000†	...	2.8	3	89.1	4.7	Finned Tube	...	Tecumseh	3	PJE300	5#3	Cap.	No	1	1,100	¼	...	...	405
*PA40-A	26	32	49¾	40,000†	...	2.8	4	73.5	6.2	Finned Tube	...	Tecumseh	(2) 2	B21U18	5#13	Cap.	No	1	1,400	⅓	...	...	470
*PA60-1(E)	27	42	57⅛	58,000†	...	3.7	4	146.3	7.8	Finned Tube	...	Tecumseh	5	PFB500	9#8	Cap.	No	1	1,800	⅛	...	...	745

†Rated under ARI standard.

Green Colonial—Green Colonial, Inc., 322 S.W. Third St., Des Moines, Iowa																							
RW21-C	59‡	22	22	24,000	...	...	...	...	...	Water	...	...	1¾	...	...	...	...	1	...	¼	...	...	385¶
RW31-C	59‡	22	22	36,000	...	...	...	...	...	Water	...	...	3	...	...	...	...	1	...	⅓	...	...	410¶
RW41, 3C	66‡	26½	26½	48,000	...	...	...	...	...	Water	...	...	3	...	...	...	...	1	...	⅓	...	...	500¶
RW61, 3-C	66‡	26½	26½	72,000	...	...	...	...	...	Water	...	...	5	...	...	...	...	1	...	¾	...	...	610¶
PA22	23	30	30¾	21,000	...	1.9	...	...	...	Finned Tube	...	...	2	...	...	Cap.	...	1	750	⅛‡	...	...	...
PA30	26	32	49½	32,000	...	2.8	...	...	...	Finned Tube	...	...	3	...	...	Cap.	...	1	1,200	¼	...	...	...

‡73 in. with plenum. ‡83 in. with plenum. ¶Shipping weight. ‖Common with condenser fan.

Haertel—Walter Haertel Co., 2840 Fourth Ave. S., Minneapolis 8, Minn.																							
VU-50	61⅛	37⅜	25⅜	6,500	...	1.18	2	...	...	Shell & Coil	3	Copeland	1½	JH50	5#	X-Valve	...	1	330	¼	2	10x20	730
VU-75	61⅛	37⅜	25⅜	10,000	...	1.18	4	...	...	Shell & Coil	3	Copeland	¾	KM75	6#	X-Valve	...	1	500	¼	2	10x20	730
VU-1	61⅛	37⅜	25⅜	13,000	...	1.18	4	...	...	Shell & Coil	3	Copeland	1	KJ-100	6#	X-Valve	...	1	700	¼	2	10x20	730
VU-2	74	46¼	29⅜	23,000	...	2.22	4	...	...	Shell & Coil	3	Copeland	2	5R6-200	10#	X-Valve	...	1	1,200	¼	2	10x20	1,400
VU-3	74	46¼	29⅜	35,000	...	4.50	4	...	...	Shell & Coil	3	Copeland	3	5R43-300	24#	X-Valve	...	1	1,800	¼	2	10x20	1,400
VU-5	79⅜	75¼	29⅜	57,500	...	7.50	4	...	...	Shell & Coil	3	Tecumseh	5	...	40#	X-Valve	...	2	3,000	⅛	2	16x25x2	2,250

Hastings Double Kool—Hastings Air Control, Inc., 3215 Leavenworth St., Omaha, Neb.																							
KF-15	22½	40¼	36⅛	42,400†	96,000‡	2.3	4 & 2	49.5	2.2	T-in-T	1.0	Tecumseh	1½	B32P16	2#	Cap.	No	2	1,200	¼	2	16x20 x2	392
DK-15	78⅛	25⅝	24	42,300†	96,000‡	2.25	4 & 2	49.5	2.4	T-in-T	1.0	Tecumseh	1½	B32P16	2#2	Cap.	No	1	1,200	⅓	2	15x20 x1	545
DK-30	78⅛	48	27	72,100†	158,000‡	3.75	4 & 2	78.0	4.5	T-in-T	1.0	Tecumseh	3	JE300	4#2	Cap.	No	1	2,200	⅝	3	16x23 x2	777
DK-50	88⅛	50⅝	29¼	120,000†	213,000‡	6.3	4 & 2	90.0	5.2	T-in-T	1.0	Tecumseh	5	FB500	6#8	Cap.	No	1	3,400	1½	3	15x30⅝x1	947

*Units contain 4-row precooling water coil, and 2-row DX coil. Standard rating based on 60° water and 85-70 entering air. ‡Based on 3-row optional heating coil, with 2-lb steam pressure.

Heatwave—Southwest Mfg. Co., P. O. Box 151, Aurora, Mo.																							
*PEQ-21	21	45	38	24,000	...	2.0	3	78	...	Finned Tube	...	Tecumseh	2	B21U18	2#	Cap.	...	...	...	...	...	...	...
*PEQ-31	21	45	38	34,000	...	2.0	4	78	...	Finned Tube	...	Tecumseh	3	JE300	3#	Cap.	...	...	...	...	...	...	...

Heil—Heil-Quaker Corp., 647 Thompson Lane, Nashville 4, Tenn.																							
*A21SC-1	23	29⅞	30¼	21,000†	...	1.9	3	85.0	3.3	Finned Tube	...	Tecumseh	1½	B21U18	2#14	Cap.	No	1	750	⅛	...	...	345
*A32SC-1	26	32	49⅜	32,000†	...	2.8	3	78.0	4.7	Finned Tube	...	Tecumseh	3	PJE300	5#3	Cap.	No	1	1,200	¼	...	...	405
*P40SC-1	26	32	49⅜	40,000†	...	2.8	4 (2)	55.0	6.2	Finned Tube	...	Tecumseh	(2) 1½	B21U18	5#13	Cap.	No	1	1,400	⅓	...	...	470
*A58SC-1	27	42	57⅛	58,000†	...	3.7	4	127.0	7.82	Finned Tube	...	Tecumseh	5	PFB500	9#3	Cap.	No	1	1,800	⅛	...	...	745

†Rated under ARI standard.

Holly—Holly General Div. of Siegler Corp., 875 South Arroyo Pkwy., Pasadena, Calif.																							
*AP2-25	24	22½	38	24,000†	...	2.0	4	48.0	2.6	Finned Tube	...	Bendix-W.	2	CH490TA-2	4#	Cap.	No	1	800	¼	...	...	325
*AP2-36	25½	40	44½	36,000†	...	3.04	3	78.0	4.0	Finned Tube	...	Tecumseh	3	PJE300	5#14	Cap.	No	1	1,200	⅓	...	...	400
*AP2-47	25½	40	44½	47,000†	...	3.04	4	96.0	4.6	Finned Tube	...	Bendix-W.	(2) 2	CH490TA-2	6#10	Cap.	No	1	1,600	½	...	...	520
*AP2-60	29⅛	45⅜	52	60,000†	...	4.0	4	127.0	6.5	Finned Tube	...	Tecumseh	5	PFB500	10#8	X-Valve	No	1	2,000	⅝	...	...	620

†Rated under ARI standard 210-58.

Homart—Sears, Roebuck & Co., 925 South Homan Ave., Chicago 7, Ill.																							
*760.14921	23	29⅞	30¼	22,000†	...	1.9	3	64.6	3.3	Finned Tube	...	Tecumseh	2	B21U18	2#2	Cap.	Yes	1	750	⅛	1	12x24 x1	345
*760.14923	26	32	49⅜	32,000†	...	2.8	3	89.1	4.7	Finned Tube	...	Tecumseh	3	PJE300	5#3	Cap.	Yes	1	1,100	¼	1	15x30⅝x1	405
*760.14931	27	42	57⅛	58,000†	...	3.7	4	146.3	7.8	Finned Tube	...	Tecumseh	5	PFB500	9#8	Cap.	Yes	1	1,800	⅛	2	20x30 x1	745

†Rated under ARI standard.

International of Utica—International Heater Co., 101 Park Ave., Utica 2, N. Y.																							
*AS-208	22	29¼	40	24,000†	...	1.81	3	55	2.82	Finned Tube	...	Tecumseh	2	B21T18	1#15	Cap.	No	1	800	⅓	...	...	370
AS-300	27	32	50	36,000†	...	2.81	3	78	4.6	Finned Tube	...	Tecumseh	3	PJE300	4#2	Cap.	No	1	1,200	¼	...	...	395

†Rated under ARI standard.

Iron Fireman, Timken—Iron Fireman Mfg. Co., 3170 W. 106th St., Cleveland 11, Ohio																							
*PA22-A	23	29⅞	30¼	22,000†	...	1.9	3	64.6	3.3	Finned Tube	...	Tecumseh	2	B21U18	3#3	Cap.	No	1	750	⅛	...	...	345
*PA30-A	26	32	49¾	32,000†	...	2.8	3	89.1	4.7	Finned Tube	...	Tecumseh	3	PJE300	5#3	Cap.	No	1	1,100	¼	...	...	405
*PA40-A	26	32	49¾	40,000†	...	2.8	4	73.5	6.2	Finned Tube	...	Tecumseh	(2) 3	B21U18	5#13	Cap.	No	1	1,400	⅓	...	...	470
*PA60-1 & 2	27	42	57⅛	58,000†	...	3.7	4	146.3	7.8	Finned Tube	...	Tecumseh	5	PFB500	9#8	Cap.	No	1	1,800	⅛	...	...	745

†Rated under ARI standard.

Janitrol Skyliner, Janitrol (PA)—Janitrol Div. of Midland-Ross Corp., 400 Dublin Ave., Columbus, Ohio																							
55-052	49	147	36	59,000†	200,000	4.72	3	...	...	Finned Tube	...	Tecumseh	5	PFB500	18	X-Valve	No	1	2,000	1	4	(2) 20x16, (2) 16x16	1,550
55-062	49	134	45	59,000†	200,000	6.21	3	...	...	Finned Tube	...	Copeland	7½	MR50-760	23½	X-Valve	No	2	3,000	2	4	20x20	1,785
55-063	51	134	45	80,000†	300,000	6.21	3	...	...	Finned Tube	...	Copeland	7½	MR50-760	23½	X-Valve	No	2	3,000	1½	4	20x20	1,880
55-108	51	152	58	106,000†	300,000	9.16	3	...	...	Finned Tube	...	Copeland	10	9R8-1000	30	X-Valve	No	2	4,000	2	4	20x25	2,450
56-060	49	115	36	59,000†	...	4.72	3	...	...	Finned Tube	...	Tecumseh	5	PFB500	18	X-Valve	No	1	2,000	⅝	4	(2) 20x16, (2) 16x16	1,300
56-080	49	102	45	80,000†	...	6.21	3	...	...	Finned Tube	...	Copeland	7½	MR50-760	23½	X-Valve	No	2	3,000	1½	4	20x20	1,425
56-100	51	120	58	106,000†	...	9.16	3	...	...	Finned Tube	...	Copeland	10	9R8-1000	30	X-Valve	No	2	4,000	3	4	20x25	1,950
PA22-A1	23	29⅞	30¼	21,000†	...	1.9	3	...	3.3	Finned Tube	...	Tecumseh	2	B21U18	2.9	Cap.	No	1	750	⅛‡	...	...	345
PA30-A1	26	32	49¾	32,000†	...	2.8	3	...	4.7	Finned Tube	...	Tecumseh	3	PJE300	5.3	Cap.	No	1	1,200	¼	...	...	405
PA40-A1	26	32	49¾	40,000†	...	2.8	3	...	6.2	Finned Tube	...	Tecumseh	(2) 2	B21U18	5.8	Cap.	No	1	1,400	⅓	...	...	470

†Rated under ARI standard 210-58. ‡Common with condenser fan.

Kauffman—Kauffman Air Conditioning Co., 4335 W. Pine Blvd., St. Louis 8, Mo.																							
*175-A	25	38	27	18,000†	17,000	4.75	3	...	2.5	Finned Tube	...	Tecumseh	1¾	...	4	Cap.	...	1	400	¼	1	P 12x16	700
*21-A	24	45	36	23,000†	31,000	5.50	2	...	3.0	Finned Tube	...	Tecumseh	2	...	5	Cap.	...	1	800	⅓	1	P 14x16	850
30-A	24	45	36	35,000†	34,000	9.0	2	...	4.0	Finned Tube	...	Tecumseh	3	...	5#8	Cap.	...	1	1,200	½	1	P 16x30	1,100
51-A	28	53	42	60,000†	58,000	11.0	2	...	7.0	Finned Tube	...	Tecumseh	5	...	18	Cap.	...	1	2,000	⅝	1	P 18x34	1,275

†Rated under ARI standard.

Laurel—Laurel Products, Inc., River Falls, Wis.																							
AC24B	19	27	...	24,000†	...	1.72	4	55/...¶	...	Finned Tube	...	Tecumseh	2	B21U18	...	X-Valve	...	1	780	⅛	...	...	...
AC30B	24⅛	41	41⅛	36,000†	...	2.58	4	80/72‡	...	Finned Tube	...	Copeland	3	4U18-302	...	X-Valve	...	1	1,180	⅛	...	...	...
AC48B	24⅛	51	41⅛	48,000†	...	3.51	4	120/59‡	...	Finned Tube	...	Copeland	4	4U26-402	...	X-Valve	...	1	1,550	⅛	...	...	...
AC60B	28⅛	57	41⅛	60,000†	...	4.34	4	129/...¶	...	Finned Tube	...	Copeland	5	4U31-502	...	X-Valve	...	1	1,950	⅛	...	...	...

†Rated under ARI standard 210-58. ¶Single-phase/three-phase.

Lennox—Lennox Industries, Inc., 200 South 12th Ave., Marshalltown, Iowa																							
CHA4-201	23	36⅜	43	23,000†	...	1.97	4	7.4	3.20	Finned Tube	...	Bendix-W.	2	CH490TA-2	4#1	Cap.	...	1	800	⅛‡	...	...	450
CHA4-301	29	35	53	30,000†	...	2.69	4	12.5	4.57	Finned Tube	...	Tecumseh	3	PJE301	6#3	Cap.	...	1	1,200	¼	...	...	650

†Rated under ARI standard 210-58. ‡Same motor drives condenser fan and evap. blower.

Luxaire—C. A. Olsen Mfg. Co., Elyria, Ohio																							
*PC-2	29	30	35	23,600†	...	2.0	3	55.0¶	...	Finned Tube	...	Tecumseh	2	B21U18	3#10	Cap.	No	2	800	¼/⅛	...	...	275‡
*PC-3	34½	35	42	35,000†	...	3.5	3	83.5¶	...	Finned Tube	...	Tecumseh	3	CL30	5#11	Cap.	No	2	1,200	⅛/⅛	...	...	365‡
*H-313-W	55⅝	30	13½	38,700†	...	3.3	3	78.0¶	...	Water	1.5	Tecumseh	3	PJE300	4#	X-Valve	No	1	1,200	⅛	1	20x25x1	380‡
*H-513-W	63⅝	43⅛	23	64,000†	...	5.0	3	127.0¶	...	Water	1.5	Tecumseh	5	PFB503	6#6	X-Valve	No	1	2,000	⅛	2	20x25x1	540‡
*2-A-100	62⅛	36⅛	28	21,400†	80,000‡	2.43	2	55.0¶	...	Finned Tube	...	Tecumseh	2	B21U18	Var.	X-Valve	Yes	1	800	⅛	1	16x25x1	...
*2-O-84	62⅛	36⅛	28	22,500†	84,000‡	2.43	2	55.0¶	...	Water	1.5	Tecumseh	2	B21U18	2#	X-Valve	Yes	1	800	¼	1	16x25x1	...
*3-A-140	68	44⅛	29	34-34,800†	112,000‡	3.3	2	82.0¶	...	Finned Tube	...	Tecumseh	3	CL30, PJE300	Var.	X-Valve	Yes	1	1,200	⅓	1	20x25x1	...
*3-O-112	68	44⅛	29	34,800†	112,000‡	3.3	3	78.0¶	...	Water	1.5	Tecumseh	3	PJE300	4#	X-Valve	Yes	1	1,200	⅓	1	20x25x1	...
*5-A-140	68	51*	50	46,500†	112,000‡	5.0	3	125.0¶	...	Finned Tube	...	Tecumseh	4	CL40	Var.	X-Valve	No	2	2,000	⅓	2	20x25x1	...
*5-O-112	68	51	50	64,000†	112,000‡	5.0	3	127.0¶	...	Water	1.5	Tecumseh	5	PFB503	6#6	X-Valve	No	2	2,000	⅓	2	20x25x1	...
*5-A-175	68	51	50	56.5-57,800†	140,000‡	5.0	3	127.0¶	...	Finned Tube	...	Tecumseh	5	PFB503, FB500	Var.	X-Valve	No	2	2,000	⅓	2	20x25x1	...
*5-O-140	68	51	50	64,000†	140,000‡	5.0	3	127.0¶	...	Water	1.5	Tecumseh	5	PFB503	6#6	X-Valve	No	2	2,000	⅓	2	20x25x1	...

Packaged Air Conditioners

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (Btuh) Cooling	Heating	Evaporator Face Area (Sq Ft)	Rows Deep	Locked Rotor Amps	Kw Input Total	Condenser Type	Water Usage Gpm/Ton	Compressor Make	Hp	Comp. Mfrs. Model No.	Refrigerant Charge (Lbs)	Control	Damper Control	Blowers No.	Cfm	Motor Hp	Air Filter No.	Dimensions	Net Weight (Lbs)
Meyer, Weir-Meyer—The Meyer Furnace Co., 1300 S.W. Washington St., Peoria, Ill.																							
PA22	23	29¼	30¼	21,000	—	1.9	3	55.0	3.3	Finned Tube	—	Tecumseh	2	B21U18	2#14	Cap.	—	1	750	½	—	—	245
PA30	26	32	49¾	32,000	—	2.8	3	78.0	4.7	Finned Tube	—	Tecumseh	3	PJE300	5#3	Cap.	—	1	1,200	¼	—	—	405
PA40	34	32	49¾	40,000	—	2.8	4	55.0	6.3	Finned Tube	—	Tecumseh	(2) 2	B21U18	5#13	Cap.	—	1	1,400	½	—	—	470
PA60	37	42	57½	58,000	—	3.7	4	127.0	7.83	Finned Tube	—	Tecumseh	5	PFB500	9#3	Cap.	—	1	1,800	½	—	—	745
Monarch—Henry Furnace Co., Medina, Ohio																							
*PC-2	23	35	35	23,000†	—	2.0	3	55.0‖	—	Finned Tube	—	Tecumseh	2	B21U18	2#10	Cap.	No	2	800	⅚/⅚	—	—	2751
*PC-3	34½	35	43	35,000†	—	3.3	3	92.0‖	—	Finned Tube	—	Tecumseh	3	CL30	5#11	Cap.	No	2	1,200	⅚/⅚	—	—	3651
*H-312-W	58½	30	19½	38,700†	—	3.3	2	78.0‖	—	Water	1.5	Tecumseh	3	PJE300	4#	X-Valve	No	1	1,200	½	1	24x25x1	2301
*H-513-W	63⅝	43½	22	64,000†	—	5.0	3	127.0‖	—	Water	1.5	Tecumseh	5	PFB505	6#6	X-Valve	No	1	2,000	½	2	20x36x1	5651
*2-A-100	43½	36¼	26	21,480†	80,000‡	2.48	3	55.0‖	—	Finned Tube	—	Tecumseh	3	B21U18	Var.	X-Valve	Yes	1	800	¼	1	16x36x1	—
*2-O-84	43½	36¼	28	22,500†	84,000‡	2.43	2	55.0‖	—	Water	1.5	Tecumseh	3	B21U18	3#	X-Valve	Yes	1	800	¼	1	16x25x1	—
*2-A-140	68	44½	29	34-34,800†	112,000‡	3.3	2	92.0‖	—	Finned Tube	—	Tecumseh	3	CL30, PJE300	Var.	X-Valve	Yes	1	1,200	½	1	20x25x1	—
*2-O-112	68	44½	29	34,800†	112,000‡	3.3	3	78.0‖	—	Water	1.5	Tecumseh	3	PJE300	4#	X-Valve	Yes	1	1,200	½	1	20x25x1	—
*5-A-140	68	51	50	46,500†	112,000‡	5.0	3	125.0‖	—	Finned Tube	—	Tecumseh	4	CL40	Var.	X-Valve	No	2	2,000	½	2	20x25x1	—
*5-O-112	68	51	50	64,000†	112,000‡	5.0	3	127.0‖	—	Water	1.5	Tecumseh	5	PFB503	6#6	X-Valve	No	2	2,000	½	2	20x25x1	—
*5-A-175	68	51	50	56.5-57,800†	140,000‡	5.0	3	127.0‖	—	Finned Tube	—	Tecumseh	5	PFB505, FB509	Var.	X-Valve	No	2	2,000	½	2	20x25x1	—
*5-O-140	68	51	50	64,000†	140,000‡	5.0	3	127.0‖	—	Water	1.5	Tecumseh	5	PFB503	6#6	X-Valve	No	2	2,000	½	2	20x25x1	—

(A) gas and (O) oil models are available either air cooled or water cooled. Data for air-cooled models shown on "A" line, water cooled on "O" line. †Net capacity; heat generated by blower motor is deducted. ‡Output. ‖Single phase. §Approximate shipping weight.

Mueller Climatrol—Mueller Climatrol, Div. of Worthington Corp., 2005 W. Oklahoma Ave., Milwaukee 1, Wis.																							
915-1-21	20⅜	21	38	22,000†	—	1.7	4	—	—	Finned Tube	—	Tecumseh	2	B21U18	2#5	Cap.	No	1	800§	⅓	1	12x25x1‖	225
915-1-31	23	34⅛	39⅝	32,000†	—	2.14	4	—	4.5	Finned Tube	—	Tecumseh	3	PJG300	6#6	Cap.	No	1	1,075§	⅓	1	14x30x1‖	430
915-1-41	25½	37⅛	43⅜	42,000†	—	2.8	4	—	5.3	Finned Tube	—	Tecumseh	(2) 2	B21U18	3#5‡	Cap./X-V†	No	1	1,375§	⅓	1	14x30x1‖	540
925-41	28½	37⅛	43⅜	42,000†	—	2.8	4	—	5.3	Finned Tube	—	Tecumseh	(2) 2	B21U18	3#5‡	Cap./X-V†	No	1	1,375§	⅓	1	14x30x1‖	600

†Rated under ARI standard 210-58. ‡Two systems: upper capillary with 3#5 charge, lower X-Valve with 3#3 charge. §At .20 in. external s.p. ¶At .18 in. external s. p. ‖Optional.

Niagara—Niagara Furnace Div., Forest City Foundries Co., 2500 W. 27th St., Cleveland 13, Ohio																							
*W-2502	26½	18½	35	19,700†	—	1.3	4	53.6	2.7	Finned Tube	—	Tecumseh	2	B21T18	3#2	Cap.	Yes	1	540	⅛	1	P 21x10	255
*PA22-1	23	29⅞	30¼	22,000†	—	1.9	3	54.6	3.3	Finned Tube	—	Tecumseh	2	B21U18	3#2	Cap.	No	1	750	½	—	—	245
*PA30-1	26	32	49¾	32,000†	—	2.8	3	80.1	4.7	Finned Tube	—	Tecumseh	3	PJE300	5#3	Cap.	No	1	1,100	¼	—	—	405
*PA40-1	26	32	49¾	40,000†	—	2.8	4	79.5	6.3	Finned Tube	—	Tecumseh	(3) 2	B21U18	5#13	Cap.	No	1	1,400	½	—	—	470

†Rated under ARI standard.

Package-Aire, Refrigerated Kooler-Aire (RK)—United States Air Conditioning Corp., P. O. Box 360, Delaware, Ohio																							
7730G	66	31½	22	36,500†	—	2.0	4	83	3.45	Shell & Coil	1.5	Tecumseh	3	JE300	9#	X-Valve	—	1	1,200	½	1	P 16x25x1	331
7750G	72½	38½	24½	60,500†	—	2.9	4	111	5.77	Shell & Coil	1.5	Tecumseh	5	FB500	13#	X-Valve	—	1	2,000	½	2	P 16x30x1	730
7775G	75½	43½	26½	91,200†	—	5.6	4	175	7.34	Shell & Coil	1.5	Copeland	7½	MR50-761	17#	X-Valve	—	2	3,000	⅝	2	P 16x25x1, 20x25x1	940
77100G	80	54½	26½	121,000†	—	7.5	4	225	9.76	Shell & Coil	1.5	Copeland	10	9R9-1000	19#	X-Valve	—	2	4,000	1¼	3	P 16x25x1	1,220
77150G	87½	73	31	152,000	—	11.1	4	334	15.05	Shell & Coil	1.5	Copeland	(2) 7½	MR50-761	34#	X-Valve	—	2	6,000	3	6	P (4) 16x30x1, (2) 16x25x1	2,050
77200G	90½	73	36½	242,000	—	14.4	4	422	19.53	Shell & Coil	1.5	Copeland	(2) 10	9R9-1000	38#	X-Valve	—	2	8,000	3	5	P 16x25x1, (2) 16x20, (3) 20x20	2,370
RK-10	61⅜	38⅛	37⅞	120,000†	—	6.75	6	250	10.88	Evaporative	—	Copeland	10	9R9-1000	20#	X-Valve	—	2	4,000	1¼	24	P 16x25x2	2,200
DRK-15	73⅝	114⅛	41⅞	180,000	—	10.10	6	370	16.17	Evaporative	—	Copeland	(2) 7½	MR50-761	41#	X-Valve	—	2	6,000	3	6	P 16x30x2	4,200
DRK-20	73⅝	114⅛	41⅞	240,000	—	13.30	6	467	21.62	Evaporative	—	Copeland	(2) 10	9R9-1000	60#	X-Valve	—	2	8,000	3	6	P 16x30x2	4,800
RK-25	77⅛	125⅛	48⅛	300,000	—	16.5	6	544	29.46	Evaporative	—	Copeland	30	6R48-3006	75#	X-Valve	—	2	10,000	5	8	P (3) 16x25x2, (3) 20x30x2	5,150
TRK-20	84⅛	137⅛	53⅛	380,000	—	18.8	6	720	31.88	Evaporative	—	Copeland	(3) 10	9R9-1000	90#	X-Valve	—	2	12,000	5	8	P (4) 16x30x2, (4) 20x30x2	7,000
DRK-40	99⅛	146⅛	60⅛	510,000	—	25.0	6	952	43.34	Evaporative	—	Copeland	20/20	‡	120#	X-Valve	—	2	16,000	7½	8	P (4) 20x25x2, (4) 20x30x2	8,850
DRK-50	105⅛	167⅞	60⅛	604,800	—	31.8	6	1054	60.00	Evaporative	—	Copeland	(2) 30	6R48-3006	150#	X-Valve	—	2	20,000	10	10	P 20x25x2	10,000
TRK-60	104⅛	218	65⅜	720,000	—	40.5	6	1262	73.00	Evaporative	—	Copeland	‡	‡	180#	X-Valve	—	2	24,000	15	12	P 20x30x2	13,800
RK-30A/C	84⅛	170	53⅛	360,000	—	18.8	6	810	45.76	Fined Tube	—	Copeland	(3) 20	4R48-2006	111#	X-Valve	—	2	12,000	5	10	P (6) 16x30x3, (4) 16x30x2	7,000

†Rated under ARI standard 210-58. 14R48-3006 and 6R48-3008. ¶(3) 20, 20. ‖Separate filter sections.

Payne—The Payne Co., 855 Anaheim Puente Rd., La Puente, Calif.																							
240AC-1D	21¼	30¼	35	23,000†	—	2.05	3	55	3.4	Finned Tube	—	Tecumseh	2	B21U18	3#14	Cap.	No	1	800	½†	—	—	330
360AC-1, 2D	25⅛	38⅛	39⅛	35,000†	—	3.20	3	78/75	5.0/5.0	Finned Tube	—	Tecumseh	3	PJE300	5#13	Cap.	No	1	1,070	½	—	—	360
480AC-1, 3	27⅝	49½	43⅜	47,000†	—	4.98	3	110/79	5.9/5.5	Finned Tube	—	Tecumseh	4	PFB400	11#	X-Valve	No	1	1,680	½	—	—	745
24-55 .	34½	30½	42	23,000†	55,000	2.50	3	60	3.6	Finned Tube	—	Carrier	2	6A25	4#‡	X-Valve	No	1	850/800	¼‖	—	—	—
36-80	34½	38	48½	34,000†	80,000	3.18	3	78/75	5.1	Finned Tube	—	Tecumseh	3	PJE300	7#	X-Valve	No	1	800/1,200	4/10‖	—	—	550
36-100	34½	38	48½	34,000†	100,000	3.18	3	78/75	5.1	Finned Tube	—	Tecumseh	3	PJE300	7#	X-Valve	No	1	800/1,200	4/10‖	—	—	—

†Rated under ARI standard. ‡R-508. ‖Dual drive. §Two speed.

Perfection—Perfection Div., Hupp Corp., 1135 Ivanhoe Rd., Cleveland 10, Ohio																							
PAS31B	24	29⅛	49¼	22,000	—	1.75	3	58.3	3.4	Finned Tube	—	Bendix-W.	2	CH490TA-2	2#10	Cap.	No	1	800	½	—	—	405
PAS30A	24	29⅛	49¼	34,000	—	2.29	3	91.05	4.7	Finned Tube	—	Bendix-W.	3	YCH830TA-2	4#3	Cap.	No	1	1,200	½	—	—	454
3PAS30A	24	29⅛	49¼	34,000	—	2.29	3	75.55	4.8	Finned Tube	—	Bendix-W.	3	YCH830TA-3	4#3	Cap.	No	1	1,200	½	—	—	450
PAS60A	30½	36¼	64½	58,000	—	3.61	3	186.0	9.6	Finned Tube	—	Copeland	5	NR46-502C	7#2	X-Valve	No	1	1,700	¾	—	—	852
2PAS60A	30½	36¼	64½	58,000	—	3.61	3	180.0	9.4	Finned Tube	—	Copeland	5	NR46-501	7#2	X-Valve	No	1	1,700	¾	—	—	850

Polar-Pak—The Coleman Co., Inc., 250 N. St. Francis, Wichita, Kan.																							
*6311A	20⅝	30	46	22,000†	—	1.92	3	48	3.20	Finned Tube	—	Bendix-W.	2	CH490TA	2#5	Cap.	No	1	960	¼	—	—	300
*6314A	21⅛	34½	53	35,000†	—	2.49	4	78	4.55	Finned Tube	—	Tecumseh	3	JE300	5#2	Cap.	No	1	1,225	½	—	—	425
*6310A	20⅝	30	46	22,000†	—	2.43	3	48	3.80	Finned Tube	—	Bendix-W.	2	CH490TA	3#5	Cap.	No	—‡	—	—	—	—	280
*6315	21⅛	34½	53	35,000†	—	3.60	3	78	4.40	Finned Tube	—	Tecumseh	3	JE300	5#8	Cap.	No	—‡	—	—	—	—	420

†Rated under ARI standard 210-58. ‡Also available in 3 phase 220 volts. §Use furnace blower for air circulation.

Reversamatic—Revco, Inc., Deerfield, Mich.																							
R2	24	34	46	24,000†	—	2.08	4	55	3.5	Finned Tube	—	Tecumseh	2	B21U18	2#8	Cap.	No	1	800	½	—	—	300
R3	24	44	56	36,000†	—	2.63	4	74	4.15	Finned Tube	—	Tecumseh	3	PJE300	4#	Cap.	No	1	1,200	⅔	—	—	400
R4	37	57	42	48,000†	—	2.8	4	110	5.9	Finned Tube	—	Tecumseh	(2) 2	B21U18	6#10	Cap.	No	1	1,600	⅔	—	—	600
R5	37	57	42	58,000†	—	3.75	4	127	8.2	Finned Tube	—	Tecumseh	5	PFB500	11#12	Cap.	No	1	2,000	⅔	—	—	750

†Rated under ARI standard 240.

Rybolt—The Rybolt Heater Co., 615 Miller St., Ashland, Ohio																							
PA-22	23	29⅛	30¼	21,000	—	1.9	3	55	3.3	Finned Tube	4.0	Tecumseh	2	B21U18	2#14	Cap.	—	1	750	½	—	—	245
PA-30	26	32	49¾	32,000	—	2.8	3	78	4.7	Finned Tube	4.9	Tecumseh	3	PJE300	5#3	Cap.	—	1	1,200	¼	—	—	405
PA-40	26	32	49¾	40,000	—	2.8	4	55	6.2	Finned Tube	4.9	Tecumseh	(2) 3	B21U18	5#13	Cap.	—	1	1,400	½	—	—	470
PA-60	37	42	57½	58,000	—	3.7	4	127	7.83	Finned Tube	9.0	Tecumseh	5	PFB500	9#3	Cap.	—	1	1,800	½	—	—	745

Thatcher—Thatcher Furnace Co., Garwood, N. J.																							
*PA 22	23	29¼	30¼	21,000†	—	1.9	3	55.0	3.3	Finned Tube	—	Tecumseh	2	B21U18	2#14	Cap.	No	1	750	½	—	—	245
*PA 30	26	32	49¾	32,000†	—	2.8	3	78.0	4.7	Finned Tube	—	Tecumseh	3	PJE300	5#3	Cap.	No	1	1,200	½	—	—	405
*PA 40	26	32	49¾	40,000†	—	2.8	4	55 ea.	6.3	Finned Tube	—	Tecumseh	(2) 2	B21U18	5#13	Cap.	No	1	1,400	½	—	—	470
*PA-60	37	57½	42	58,000†	—	3.7	4	127.0	7.8	Finned Tube	—	Tecumseh	5	PFB500	9#3	Cap.	No	1	1,800	½	—	—	745

†Rated under ARI standard

Thomas A. Edison—Albion Div., McGraw-Edison Co., 704 N. Clark St., Albion, Mich.																							
*TH2A21	17⅝	28	36	21,000†	—	1.5	4	—	3.32	Finned Tube	—	Tecumseh	2	B21U18	2.46	Cap.	No	1	800	½	—	—	—
*TH3A21	23⅞	30½	53¼	30,000†	—	2.5	3	—	4.3	Finned Tube	—	Tecumseh	3	PJG300	5.5	Cap.	No	1	1,250	⅝	—	—	—
*TH4A21	26⅛	36⅛	48⅛	40,000†	—	3.13	5	—	6.16	Finned Tube	—	Tecumseh	(2) 2	B21U18	6.1	Cap.	No	2	1,625	⅛/⅛	—	—	—

†Rated under ARI standard 210-58.

Typhoon—Typhoon Air Conditioning Div., Hupp Corp., 505 Carroll St., Brooklyn 15, N. Y.																							
H-46-SC	73½‡	37	34½	37,000†	91,200	3.81	4	68	3.7	T-In-T	4.6	Tecumseh	3	JE300	6#8	X-Valve	—	1	1,200	¼	2	16x25x1, 20x25x1	390
H-66-SC	73½‡	37	34½	60,500†	140,000	4.67	4	125	5.74	T-In-T	7.6	Copeland	5	NR-46-501	9#	X-Valve	—	2	2,000	½	3	16x25x1, 20x25x1	725
H-86-SC	73½‡	37	34½	97,500†	194,000	4.67	6	135	7.65	T-In-T	12.3	Copeland	7½	MRG750	11#	X-Valve	—	2	2,500	⅝	3	16x25x1, 20x25x1	825
H-117-SC	83 *	53	33	125,000†	297,000	9.42	4	180	9.71	T-In-T	15.0	Copeland	10	9R9-1000	16#	X-Valve	—	3	4,000	1	4	16x25x1	1,145
H-167-SC	83 **	53	33	182,000†	364,000	9.42	6	250	16.92	T-In-T	23.5	Copeland	15	4R48-1500	19#8	X-Valve	—	3	5,600	3	4	16x25x1	1,345
H-216-SC	95 ††	62	35	252,000†	631,000	13.0	5	180‖	20.31	T-In-T	31.5	Copeland	(2) 10	9R9-1000	16#‡	X-Valve	—	3	8,000	3	8	P 16x30x2	1,650
H-217-SC	95 ††	62	35	242,500†	631,000	13.0	5	250	17.74	T-In-T	30.5	Copeland	20	4R48-2006	25#‡	X-Valve	—	3	8,000	3	8	P 16x30x2	1,460
H-267-SC	95 ††	62	35	324,000†	631,000	13.0	6	180/250	27.78	T-In-T	37.7	Copeland	10/15	9R9-1000, 4R48-1500	16/19#‡	X-Valve	—	3	8,000	3	8	P 16x30x2	2,150
H-268-SC	92	90	35	330,000†	858,000	30.0	4	180/250	29.7	T-In-T	38.6	Copeland	10/15	9R9-1000, 4R48-1500	16/19#‡	X-Valve	—	3	10,000	5	8	P ¶	2,180
H-318-SC	92	90	35	384,000†	905,000	30.0	5	250‖	35.15	T-In-T	42.0	Copeland	(2) 15	4R48-1500	19#‡‖	X-Valve	—	3	12,000	7½	8	P ¶	2,280
H-418-SC	92	116	40½	483,000†	1,235,000	30.9	4	250‖	37.35	T-In-T	60.3	Copeland	(2) 20	4R48-2006	25#‡	X-Valve	—	3	16,000	7½	10	P (4) 20x16x3, (4) 25x16x3	3,650
H-518-SC	92	116	40½	603,000†	1,450,000	30.9	5	250‖	55.35	T-In-T	90.4	Copeland	(3) 15	4R48-1500	19#‡‖	X-Valve	—	3	18,000	10	10	P (4) 20x16x3, (4) 25x16x3	3,400
H-519-SC	106	120	45	640,000†	1,550,000	38.8	4	250/180‖	52.6	T-In-T	80.0	Copeland	(3) 20/10	4R48-2006, 9R9-1000	25‡/16#‡	X-Valve	—	3	20,000	10	21	P 20x16x2	4,250
H-618-SC	106	120	45	725,000†	1,550,000	38.8	5	250‖	68.5	T-In-T	91.0	Copeland	(3) 20	4R48-2006	25#‡	X-Valve	—	3	24,000	12	21	P 20x16x2	4,500
H-768-SC	106	120	45	925,000†	1,550,000	38.8	6	250‖	83.0	T-In-T	114.0	Copeland	(4) 20	4R48-2006	25#‡	X-Valve	—	3	24,000	15	21	P 20x16x2	4,750
H-60CMU	32	44	57	60,000†	140,000	4.83	4	125	5.31	T-In-T	7.8	Copeland	5	NR-46-501	8#	X-Valve	—	1	2,000	½	2	20x30x1	845
H-90CMU	32	44	57	97,500†	194,000	4.83	6	125	7.89	T-In-T	12.3	Copeland	7½	MRG-751	11#	X-Valve	—	1	3,000	1	3	20x30x1	970
3 ACSC	43	80	35½	37,000†	—	3.81	4	62	3.81	Finned Tube	—	Tecumseh	2	JE300	6#8	X-Valve	—	1	1,200	¼	2	20x16x1	935
5 ACSC	52	104	27½	63,500†	—	5.26	4	125	5.94	Finned Tube	—	Copeland	5	NR-46-501	9#	X-Valve	—	1	2,000	½	2	25x16x1	1,221
81 ACSC	47⅜	56	76	85,600†	—	5.98	4	125	9.33	Finned Tube	—	Copeland	7½	MRG751	11#	X-Valve	—	2	3,000	¾	—	—	1,360
101 ACSC	47⅜	56	76	114,000†	—	7.31	4	180	13.55	Finned Tube	—	Copeland	10	9R9-1000	16#8	X-Valve	—	2	4,000	1	—	—	1,500
151 ACSC	68	155¼	33½	172,000†	—	12.0	4	250	19.4	Finned Tube	—	Copeland	15	4R48-1500	19#8	X-Valve	—	3	6,000	5½	6	(3) 16x30x1, (3) 20x20x1	2,625
20 ACSC	68	186	35	228,000†	—	13.0	5	180	25.5	Finned Tube	—	Copeland	(2) 10	9R9-1000	16#8	X-Valve	—	3	8,000	3	6	16x30x3	3,460

†Rated under ARI standard. §80°-67° entering air (evap.) 400 cfm/ton across evap. 75° condensing water or 95° db outside air. ‡87½ in. with plenum. **98⅝ in. with plenum. **103⅝ in. with plenum. ††117 in. with plenum. ‖Each. ¶Two each 20x16x2, 25x16x2, 25x30x2, 20x30x2. Water usage is total gpm, generally 1.5 gpm/ton.

Ventil-Aire—Ventil-Aire Corp., 1815 Decatur St., Ridgewood 27, N. Y.																							
RHC652-Gas	48	48	132	55,000†	300,000	4.2	4	—	6.75	Finned Tube	—	West'house	5	CL8-52	12#	X-Valve	Yes	1	2,000	¾	4	16x20x1	2,000
RHC652-Oil	48	48	132	55,000†	250,000	4.2	4	—	6.75	Finned Tube	—	West'house	5	CL8-52	13#	X-Valve	Yes	1	2,000	¾	4	16x20x1	2,200
RHC802-Gas	48	58	132	80,140†	250,000	6.25	4	—	9.25	Finned Tube	—	West'house	7½	CL8-81	14#	X-Valve	Yes	1	3,000	1	4	16x30x1	2,250
RHC802-Oil	48	58	132	80,140†	250,000	6.25	4	—	9.25	Finned Tube	—	West'house	7½	CL8-81	14#	X-Valve	Yes	1	3,000	1	4	16x30x1	2,800
RHC1002-Gas	48	48	147	113,000†	300,000	8.8	4	—	13.00	Finned Tube	—	Copeland	10	9R9-1000	16#	X-Valve	Yes	2	4,000	1½	6	(4) 20x30x1, (2) 16x30x1	3,000
RHC1002-Oil	48	48	180	112,000†	330,000	8.8	4	—	13.00	Finned Tube	—	Copeland	10	9R9-1000	16#	X-Valve	Yes	2	4,000	1½	6	(4) 20x30x1, (3) 16x30x1	3,600
RHC1602-Gas	48	58	183	172,380	400,000	13.15	4	—	18.80	Fined Tube	—	West'house	(3) 7½	CL8-81	24#	X-Valve	Yes	3	6,000	3	6	20x30x1	3,700
RHC1602-Oil	48	58	220	172,380	540,000	13.15	4	—	18.80	Fined Tube	—	West'house	(2) 7½	CL8-81	24#	X-Valve	Yes	3	6,000	3	6	20x30x1	3,900

Also available without heating, the 652 and 802 are 94 in. deep, 1002 is 106 in. deep, 1502 is 142 in. deep. †Rated under ASRE standard condition 95° ambient, 45° suction.

Vikimatic—Vikimatic, Inc., 1747 Chester, Cleveland 14, Ohio																							
CPW-301	70	28	21⅛	24,780†	—	2.0	4	54.0	2.9	Co-Axial	1.7	Bendix-W.	2	CH490TA-2	2#13	Cap.	No	1	800	¼	1	—	535
CPW-301	70	28	21⅛	28,650†	—	2.9	4	62.0	3.4	Co-Axial	1.6	Tecumseh	3	JE300	4#5	Cap.	No	1	1,200	½	1	—	550
CPW-801	79½	36	25	65,800†	—	4.2	4	120.0	5.5	Co-Axial	1.6	Tecumseh	5	FB500	6#	Cap.	No	1	2,000	½	1	—	700
*AH-21A	18	30	40	23,000†	—	1.8	4	48.0	2.5	Finned Tube	—	Bendix-W.	2	CH490TA-2	4#6	Cap.	—	1	750	½	—	—	—
*AH-31A	27	30	48

Packaged Air Conditioners

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities (Btuh) Cooling	Heating	Evaporator Face Area (Sq Ft)	Rows Deep	Locked Rotor Amps	Kw Input Total	Condenser Type	Water Usage Gpm/Ton	Compressor Make	Hp	Comp. Mfrs. Model No.	Refrigerant Charge (Lbs)	Control	Damper Control	Blowers No.	Cfm	Motor Hp	Air Filter No.	Dimensions	Net Weight (Lbs)
Weibilt—Weibilt Air Conditioning & Heating Corp., R-524 Lakewood Rd., Farmingdale, N. J.																							
WAW-30	66	35¼	25½	28,000†	120,000	2.7	4	—	3.55	Shell & Coil	1.5	Tecumseh	3	PJE300	9	X-Valve	No	1	1,200	½	1	P 14⅝x34⅝x1	764
WAW-50	71½	44⅝	26⅝	61,500†	222,000	4.4	4	—	6.3	Shell & Coil	1.5	Tecumseh	5	PFH500	11	X-Valve	No	1	2,000	¾	1	P 18⅝x34⅝x1	925
WAW-70	71	51	30¼	90,000†	353,000	6.7	4	—	6.5	Shell & Coil	1.5	Copeland	7½	MRG-750	13	X-Valve	No	2	3,000	(2) ½	2	P 19½x25½x1	1,167
WAW-100A	75¼	57	30¼	120,000†	401,000	9.0	4	—	9.6	Shell & Coil	1.5	Copeland	10	9RS-1000	16	X-Valve	No	2	4,000	(2) ¾	2	P 20¼x23¼x1	1,600
WAW-100	75¼	57	30¼	120,000†	401,000	9.0	4	—	12.6	Shell & Coil	1.5	Tecumseh	(2) 5	PFH500	22	X-Valve	No	2	4,000	(2) ¾	2	P 20¼x23¼x1	1,581
WAW-150	75	70	31¼	180,000	558,900	13.5	4	—	19.1	Shell & Coil	1.5	Copeland	(2) 7½	MRG-750	26	X-Valve	No	2	6,000	(2) ¾	3	P (2) 20¼x23⅛, (1) 14⅝x25¼	3,100
WAW-300	75	70	31¼	340,000	802,000	13.5	8	—	17.3	Shell & Coil	1.5	Copeland	(2) 10	9RS-1000	32	X-Valve	No	2	8,000	(2) 1	3	P (2) 29¼x23⅛, (1) 14⅝x25¼	3,400
WAW-270	90	74	45	225,500	1,005,000	20.5	4	—	24.04	Shell & Coil	1.5	Copeland	10/17½	9RS-1000, 4R48-1500	46	X-Valve	No	3	11,000	3	6	P 20x25x1	4,200
WAW-350	90	94	45	416,000	1,300,500	24.6	4	—	30.8	Shell & Coil	1.5	Copeland	(2) 17½	4R48-1500	60	X-Valve	No	3	14,000	5	6	P 25x25x1	5,100

Dimensions do not include plenum. All models available as receiver models with remote matching air-cooled condensers—become model WAA. †Rated under ARI standard 210-58.

Westernaire—Western Supply Co., Hutchinson, Kansas																							
201, 3CPW	57½	35¼	21¾	34,780	—	2.0	4	56/43.6	2.9	Co-Axial	1.3	Tecumseh	3	JE300	2#7	Cap.	—	1	800	¼	1	20x20x1	329
201, 3CPW	57½	35¼	21¾	38,650	—	2.9	4	52/48	3.4	Co-Axial	1.3	Tecumseh	3	JE300	3#4	Cap.	—	1	1,200	⅓	1	20x20x1	360
501, 3CPW	66⅝	35	34⅝	65,800	—	4.6	4	125/90	5.5	Co-Axial	1.3	Tecumseh	5	FH500	6#	Cap.	—	1	2,000	½	2	16x25x1	615
AH31-A	18⅝	30¼	38½	23,500	—	1.8	4	52.4	2.52	Finned Tube	—	Bendix-W	2	CH490TA-2	4#6	Cap.	—	1	820	⅓	—	—	349
AH31, 3-A	26⅝	30¼	48¼	34,000	—	3.0	4	78/68	3.75	Finned Tube	—	Tecumseh	3	JE300	6#	Cap.	—	1	1,200	⅓	—	—	399
AH41-A	26⅝	30¼	48¼	46,000	—	3.8	4	110	4.22	Finned Tube	—	Copeland	4	4U36-402	9#	Cap.	—	1	1,600	⅓	—	—	445
AH51, 3-A	35⅝	38½	61	58,000	—	4.4	4	125/80	6.5	Finned Tube	—	Tecumseh	5	FH500	11#4	Cap.	—	1	2,000	½	—	—	800
AH73-A	44	43¾	78	90,000	—	5.6	4	135	8.35	Finned Tube	—	Copeland	7½	MR50-761F	20#	X-Valve	—	2	3,000	¾	—	—	1,580

Western & Atlas—Global Air Conditioning Corp., 2045 Evans Ave., San Francisco 24, Calif.																							
*21SC-2	22¼	33¼	35¾	22,700†	—	2.30	3	55.0	3.19	Finned Tube	—	—	2	—	2#4	Cap.	No	2	800	¼	—	—	280
*21SC-1	23	29⅜	39¾	32,200†	—	3.0	3	55.0	3.35	Finned Tube	—	Tecumseh	3	B21U18	2#14	Cap.	No	2	750	⅓	—	—	265
*31SC-1	24	32	46⅛	32,500†	—	3.8	3	107.8‡	4.68	Finned Tube	—	Tecumseh	3	JE300	4#12	Cap.	No	2	1,200	⅜	—	—	435
*31SC-2	—	—	—	—	—	—	—	—	—	Finned Tube	—	—	—	—	—	Cap.	—	—	—	—	—	—	—
*41SC	34	32	59½	43,400†	—	3.8	4	138.5‡	7.00	Finned Tube	—	Tecumseh	4	—	—	Cap.	No	1	1,675	½	—	—	565
*41SC-1	34	32	59½	43,400†	—	3.8	4	138.5‡	7.00	Finned Tube	—	Tecumseh	(2) 2	B21U18	6#4	Cap.	No	1	1,675	½	—	—	568
*51SC	37	42	57½	54,000†	—	3.75	4	127.0	8.3	Finned Tube	—	Tecumseh	5	PFH500	11#12	Cap.	No	1	2,000	⅛	—	—	760

†Rated under ARI standard. ‡Locked rotor amps include blower motors.

Westinghouse, Unitaire—Westinghouse Electric Corp., Air Conditioning Div., Staunton, Va.																							
PCU-2A	21⅛	30	40	24,000†	—	1.88	4	—	3.3‡	Finned Tube	—	Tecumseh	2	—	—	Cap.	No	1	900	⅛	—	—	292
PCU-3A	25⅜	34	45⅛	32,000†	—	2.67	4	—	4.9‡	Finned Tube	—	Tecumseh	3	—	—	Cap.	No	1	1,340	⅛	—	—	423
PCU-4B	31⅛	40⅛	64⅛	48,000†	—	3.67	4	—	6.7‡	Finned Tube	—	Tecumseh	(3) 2	—	—	Cap.	No	2	1,710	⅛	—	—	662
PCU-5B	31⅛	40⅛	70⅛	61,000†	—	4.67	4	—	9.3‡	Finned Tube	—	Tecumseh	(2) 3	—	—	Cap.	No	2	2,080	¾	—	—	834
SU-402	75⅜	34⅞	25	38,000†	55,900**	2.9	2	—	3.7‡	Tube-in-Tube	—	West'house	3	—	3.0	X-Valve	No	1	1,200	½	1	20x25x1	540
SU-602A	82⅜	41⅞	27	60,000†	91,200**	4.0	3	—	6.25‡	Shell & Coil	—	West'house	5	—	8.5	X-Valve	No	1	2,000	¾	2	16x20x1	750
SU-802A	91	53⅛	28½	80,000†	143,500**	6.0	3	—	8.5‡	Shell & Coil	—	West'house	7½	—	11.0	X-Valve	No	1	3,000	1	4	(2) 12x20x1, (2) 12x25x1	900
MU-113	90⅛	53⅛	31⅝	120,000†	254,500**	8.9	4	—	11.4‡	Tube in Shell	—	West'house	(2) 5	—	22.0†	X-Valve	No	2	4,000	1½	3	20x30x2, 25x30x2	1,510
MU-143	90⅛	71⅞	31⅝	180,000†	348,000**	12.1	4	—	17.2‡	Tube in Shell	—	West'house	(2) 7½	—	22.0	X-Valve	No	2	6,000	3	3	20x30x2	1,730
MU-213	97⅛	85	34⅞	267,700†	399,000**	18.0	4	—	25.8‡	Tube in Shell	—	West'house	(3) 7½	—	33.0	X-Valve	No	2	8,000	3	4	20x20x2	2,480
MU-263	99⅜	96	34⅞	397,600†	486,000**	20.0	4	—	27.8‡	Tube in Shell	—	West'house	(3) 7½	—	33.0	X-Valve	No	2	10,000	5	8	††	2,600
MU-313	99⅜	96	34⅞	516,000†	639,000**	20.0	4	—	27.8‡	Tube in Shell	—	West'house	(4) 7½	—	44.0	X-Valve	No	2	12,000	7½	8	††	3,135
LU-411	111⅛	110	36	404	520,000**	24.3	6	—	33.9‡	Tube in Shell	—	West'house	40	—	60.0	X-Valve	No	2	12,100	7½	7	‡‡	4,000
LU-511	119	110	36	501	1,080,000**	31.0	6	—	34.2‡	Tube in Shell	—	West'house	50	—	104.0	X-Valve	No	2	18,800	10	8	(4) 25x30x2, (4) 20x25x2	4,960

†Rated under ARI standard. ‡Tons. **At 180° water, 60° F. entering air. ‡At .4 s.p. ‡At ARI conditions. †Refrigerant-12. ††(3) 25x20x2, (2) 20x20x2, (3) 25x16x2, (2) 20x16x2. ‡‡(3) 25x30x2, (2) 16x25x2, (3) 16x20x2.

Worthington—Worthington Corp., Ampere Station, East Orange, N. J.																							
SCY-40	82⅞	37¼	21¼	34,800†	106,000	3.6	3	—	4.35	Shell & Coil	1.5	Worthington	3	2JF3-3	9#	X-Valve	—	1	1,200	½	2	16x20x1	780
SCY-60	86	48¼	21¼	60,300†	165,000	5.22	3	—	7.07	Shell & Coil	1.35	Worthington	5	2JF5	12#	X-Valve	—	2	2,000	¼	2	20x20x1	910
SCY-80	88½	53¾	23⅝	80,200†	235,000	7.31	3	—	10.95	Shell & Coil	1.35	Worthington	7½	2JF5	14#	X-Valve	—	2	3,000	⅝	3	16x25x1	1,260
SCY-1100	88½	58¼	23⅝	121,000†	268,000	9.2	4	—	10.56	Shell & Coil	1.5	Worthington	10	2JF5-10	22#	X-Valve	—	2	4,000	1½	3	(2) 20x25x1, 16x25x1	1,350
SCY-1550	99⅝	82¼	31½	195,800	365,000	13.0	4	—	17.34	Shell & Coil	1.34	Worth.	(2) 7½	2JF5	28#	X-Valve	—	2	6,000	2	5	(4) 16x20x1, (4) 20x20x1	2,570
SCY-3060	73⅛	78	38	349,000	851,000	21.9	4	—	19.49	Shell & Coil	1.5	Worth.	(2) 10	2JF5-10	44#	X-Valve	—	2	8,000	3	7	(6) 20x25x1, 16x25x1	3,210
SCY-3550	73⅛	78	38	315,000	992,000	21.9	4	—	21.9	Shell & Coil	1.5	Worth.	(3) 7½	2JF5	52#	X-Valve	—	2	10,000	5	7	(6) 20x25x1, 16x25x1	3,610
SCY-3060	76	90	41	362,000	1,171,000	25.6	5	—	23.7	Shell & Coil	1.5	Worth.	(3) 10	2JF5-10	66#	X-Valve	—	3	12,000	5	10	(8) 16x25x1, (3) 20x25x1	5,100
SCY-4050	76	110	41	498,000	1,500,000	34.4	4	—	40.0	Shell & Coil	1.5	Worth.	(4) 10	2JF5-10	88#	X-Valve	—	3	16,000	7½	10	20x25x1	5,500
SCY-5050	77½	154¼	38	630,000	1,984,000	43.8	4	—	53.5	Shell & Coil	1.5	Worth.	(6) 7½	(2)2JF5	104#	X-Valve	—	4	20,000	(2) 3	14	(12) 20x25x1, (2) 16x25x1	5,600
SCY-6050	81½	180¼	41	726,000	2,342,000	51.2	5	—	67.4	Shell & Coil	1.5	Worth.	(6) 10	(3)2B-JF5-10	123#	X-Valve	—	6	24,000	(2) 5	20	(16) 16x25x1, (4) 20x25x1	6,500
SAC-40	82⅞	37¼	21¼	33,000	106,000	3.60	3	—	4.9	Finned Tube	—	Worth.	3	2JF3-3	19#	X-Valve	—	1	1,200	½	2	16x20x1	1,060
SAC-60	86	48¼	21¼	54,000	165,000	5.22	3	—	8.05	Finned Tube	—	Worth.	5	2JF5	34#	X-Valve	—	2	2,000	¼	2	20x20x1	1,190
SAC-80	88½	58¼	23⅝	81,000	235,000	7.31	3	—	13.01	Finned Tube	—	Worth.	7½	2JF5	30#	X-Valve	—	2	3,000	⅝	3	16x25x1	1,680
SAC-1100	88½	58¼	23⅝	104,000	268,000	9.2	4	—	13.23	Finned Tube	—	Worth.	10	2JF5-10	40#	X-Valve	—	2	4,000	1½	3	(2) 20x25x1, 16x25x1	2,000
SAC-1550	99⅝	82¼	31½	178,700	365,000	13.0	4	—	22.13	Finned Tube	—	Worth.	(2) 7½	2JF5	60#	X-Valve	—	2	6,000	2	5	(4) 16x20x1, (4) 20x20x1	3,500
SAC-3060	73⅛	78	38	321,000	851,000	21.9	4	—	23.15	Finned Tube	—	Worth.	(2) 10	2JF5-10	80#	X-Valve	—	2	8,000	3	7	(6) 20x25x1, 16x25x1	4,000
SAC-3550	73⅛	78	38	372,000	992,000	21.9	4	—	25.3	Finned Tube	—	Worth.	(3) 7½	2JF5	90#	X-Valve	—	2	10,000	5	7	(6) 20x25x1, 16x25x1	4,600
SAC-3060	76	90	41	333,000	1,171,000	25.6	5	—	37.0	Finned Tube	—	Worth.	(3) 10	2JF5-10	120#	X-Valve	—	3	12,000	5	10	(8) 16x25x1, (3) 20x25x1	5,800
SAC-4050	76	110	41	443,000	1,500,000	34.4	4	—	47.4	Finned Tube	—	Worth.	(4) 10	2JF5-10	160#	X-Valve	—	3	16,000	7½	10	20x25x1	7,400
SAC-5050	77½	154¼	38	544,000	1,984,000	43.8	4	—	70.6	Finned Tube	—	Worth.	(6) 7½	(2)2JF5	180#	X-Valve	—	4	20,000	(2) 3	14	(12) 20x25x1, (2) 16x25x1	10,100
SAC-6050	81½	180¼	41	664,000	2,342,000	51.2	5	—	74.0	Finned Tube	—	Worth.	(6) 10	(3)2BJF5-10	240#	X-Valve	—	6	24,000	(2) 5	20	(16) 16x25x1, (4) 20x25x1	12,000

†Rated under ARI standard.

York—York Div., Borg-Warner Corp., York, Pa.																							
254	72	35	22	30,000†	91,800	3.8	3	50/80‡	3.13	T-In-T	—	York	3	HA364	7#	Cap.	—	1	1,200	¼	4	16⅝x13¼x1	611
554	72	42	32	60,100†	147,600	5.3	3	77/87‡	5.63	T-In-T	—	York	5	JA462	8#10	Cap.	—	1	2,000	⅓	4	16⅝x16⅝x1	774
753	80½	46	37	90,500†	195,500	8.7	3	108/...‡	8.53	T-In-T	—	York	7½	KA482	8#12	Cap.	—	1	3,000	¾	4	16⅝x30⅝x1	925
1003	83¼	71	36	131,000†	251,500	10.9	3	77/...‡	11.35	T-In-T	—	York	(2) 5	JA482	8#10	Cap.	—	1	4,000	1½	4	15⅝x25⅝x1	1,610
1503	85⅝	79¾	39½	204,000	358,000	13.0	4	108/...‡	17.43	T-In-T	—	York	(3) 7½	KA482	13#	Cap.	—	2	6,000	3	4	15⅝x30⅝x1	1,963
2501	104	79¾	43	298,000	535,000	20.0	4	108/...‡	26.34	T-In-T	—	York	(3) 7½	KA482	13#	Cap.	—	2	9,000	3	6	(3) 25x16x1, (3) 25x20x1	2,567
EW400	100⅝	89	51⅝	400,000	726,000	25.5	4	120/...‡	33.4	T-In-T	—	York	(4) 7½	KA482	13#	Cap.	—	2	12,000	7½	10	(2) 25x20x1, (4) 25x16x1	3,305
*P24F	24	33⅝	40¼	23,000†	—	3.08	3	.../51.2‡	3.98	Finned Tube	—	York	2	G3673	2.5	Cap.	—	1	800‡	⅛	—	—	262
*P36F	27	40⅝	42¾	34,000†	—	3.77	4	60.5/70.5‡	4.51	Finned Tube	—	York	3	H2780	5.1	Cap.	—	1	1,200‡	¼	—	—	365
*P48F	29	47⅜	45⅞	46,000†	—	4.89	3	82.5/55.5‡	6.46	Finned Tube	—	York	(2) 3	G3672	(2) 3.1	Cap.	—	1	1,600‡	½	—	—	545

†Rated under ARI standard. ‡3-phase/1-phase. ‡At 0.33 s.p. ‡At 0.36 s. p. ‡At 0.45 s.p.

* * *

Key to Abbreviations

To help you read the specifications more easily, here is a key to the abbreviations used and shortcuts taken to bring you more information in less space.

General

Asterisk before model number indicates a unit designed for residential application.

Model numbers given here may represent a combination of the manufacturer's model numbers where the data is identical or almost identical for both units. Thus a model number written AC-500X(Y) represents models AC-500X and AC-500Y.

Or, a model number written AC-51-3 represents AC-51 and AC-53. This usually occurs when the only difference between the two is single phase or three-phase application.

Where models are combined, differing data is separated by /. Thus, if the two models had different net weights, the figures would be written 95/100.

Figures in parentheses indicate the number of this item in the model. Thus (2) 7½ in the compressor column indicates two compressors of 7½ hp. each. Similarly with filters and blowers.

The letter P before filter dimensions indicates a permanent type filter.

Refrigerant-22 is assumed in all categories except liquid chillers. Where another refrigerant is used, it is indicated in the foot note at the end of the manufacturer's listing.

Liquid Chillers—In the "compressor type" column, the letters "B" and "D" indicate belt drive or direct drive.

Heat Pumps—On split system heat pumps, where dimensions for both the inside and outside units were supplied, model number for the inside unit follows that of the outside unit and is usually indented slightly.

Defrost Type: AS—Air Switch, TD—Temperature Differential, PD—Pressure Differential, T/T—Time-Temperature, T/P—Time-Pressure.

Split Systems—Condensing unit data is on the left side of the page and evaporator, evaporator-blower data on the right side.

Due to space limitations, only data on "A" type evaporators is included unless the manufacturer does not have one in a particular size range. Then he has substituted a horizontal or downflow unit. These are indicated by (H) or (D) before or in the model number. Most manufacturers offer evaporators to handle a variety of air flows.

Where c.f.m. ratings are given without further blower information, this indicates that the manufacturer does not furnish the blower. C.f.m. given is that which the coil requires.

You Asked About It

Edited by Hugh T. Mahar

Q. Can you give us the name of a firm which makes an alarm which can be installed on a refrigerator or air conditioner, going off when there is a fault in the installation causing the temperature to rise?

MHN—Hawaii

A. Yes:

"Temp-Guard," manufactured by Franklin Dales Co., 180-184 E. Mill St., Akron, Ohio;

"Temp-O-Larm Detector," produced by Kidde Ultrasonic & Detection Alarms, Inc., 495 Brighton Rd., Clifton, N. J.; and

"Televance Sentry," made by Televance Corp., P.O. Box 3043 St. Louis, Mo.

* * *

Q. What procedures should be used for obtaining maintenance contracts on commercial refrigeration and air conditioning?

JRR—Philadelphia

A. Much helpful information on this subject may be obtained from a NEWS reprint entitled "Service Maintenance Contracts and Average Charges for Service Parts & Operations." This is available from the NEWS for 50¢ per copy.

Edited by Hugh T. Mahar, a broadened *You Asked About It* column begins this week.

Formerly limited to things technical, this column will extend its scope to reflect the wide range of reader service performed by the NEWS. From our files, from our editorial staff, from experts in the field, Mahar will draw the information necessary to answer reader questions of general interest whether they be on engineering or merchandising, on service or accounting.

"Corrosion." By Frank J. Versagi—50¢ each.

Get your copy Mail this ad with your name and address to: Air Conditioning, Heating & Refrigeration News, 450 W. Fort St., Detroit 26, Mich.

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★

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COPPER WATER TUBE K-L-M

COPPER THREADLESS PIPE (TP)

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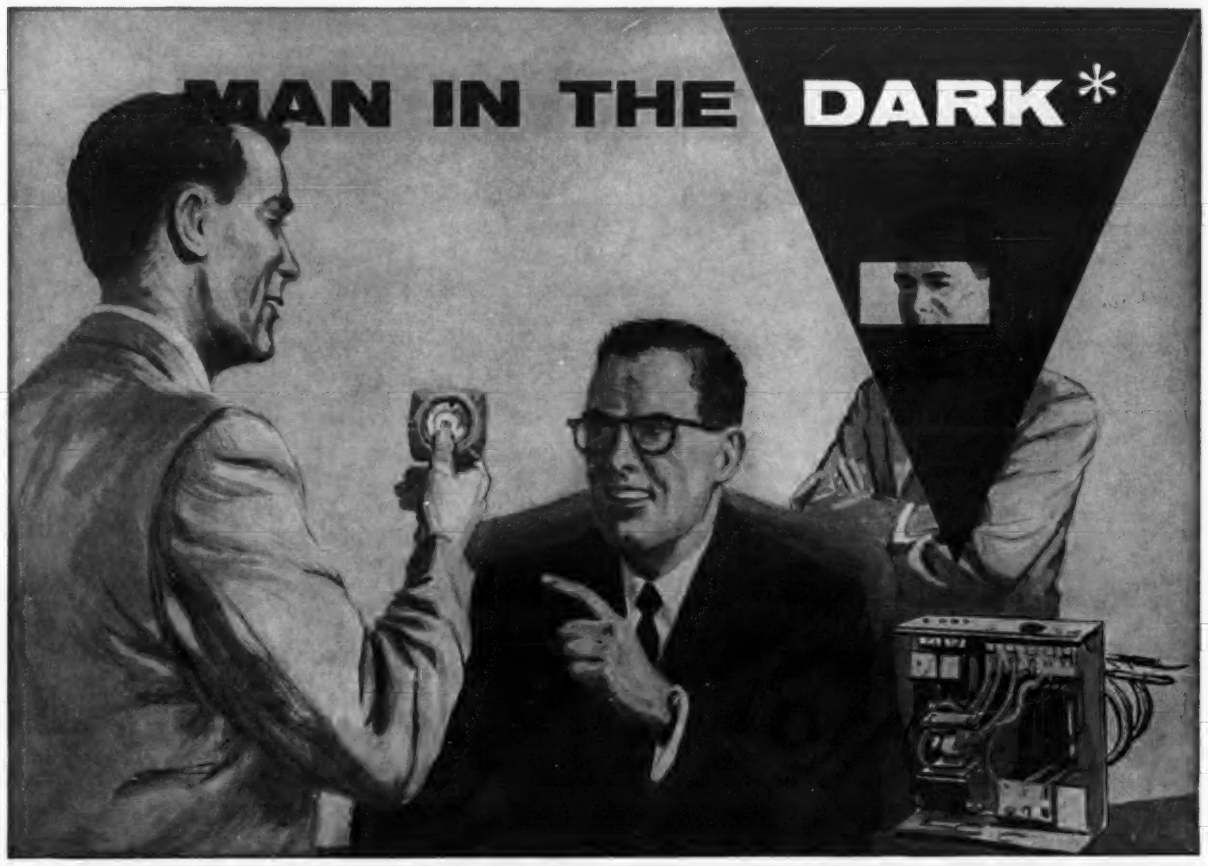
COPPER PIPE

COPPER DRAINAGE TUBE (DWV)

PLUMBERS BRASS GOODS

SCOVILL MANUFACTURING COMPANY • COPPER TUBE MILL PRODUCTS, WATERBURY 20, CONN.

105C60



"If only I'd known about that a week ago!"

There's no room for second-guessing in the fast-moving world of air conditioning, heating and refrigeration. It takes a man armed with *current* facts to build a brighter future for himself and his company – and yours!

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See your local NEWS Representative soon. He'll gladly show you facts and figures that can throw new light on your sales picture.

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DETROIT: .....450 West Fort Street, WOodward 2-0924.

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Contractor's 'Hobby' of Studying His Business Pays Off In Close Cost Control & Efficiency

By C. Dale Mericle

AUGUSTA, Ga.—Probably no contractor in the country knows more about the actual day-to-day financial status of his business, and finds it out with apparently so little effort, than does Sig Cox, who's been in the business here since 1926.

At the end of every day, for example, he's handed a profit-and-loss statement which shows the firm's exact cash position: how much cash is actually in the bank, what bills are due tomorrow, and receivables.

All this is done by just one bookkeeper in the course of her normal daily work, thanks to a relatively small mechanical business machine that Cox has trained to sit up, beg, roll over, and jump through hoops, much to the amazement of its manufacturer.

Firm Does Half Million Business a Year

This is not exactly a small business, either, for the firm—Sig Cox Refrigeration and Air Conditioning—employs between 40 and 50 people, owns 21 cars and trucks, and does a volume in the neighborhood of half a million dollars annually.

The time and labor-saving approach that Cox has developed for analyzing the financial status of the firm has been applied also to all other phases of the business, including engineering, fabrication of ductwork, installation, service, and, as far as possible (which can't be so very far) sales.

Most of all, perhaps, he's applied this approach to his own function in the day-to-day operation of the firm, assuming he's not being overly modest in disclaiming much participation in these routine activities. But it is a fact that in 1959 he and Mrs. Cox took off for a nine-week camping trip drive up to Alaska.

What makes this sort of thing possible, Cox explains, is his interest in training and developing individuals in the firm to assume responsibility and then actually turning over full responsibility to them. Thus, it isn't necessary that Cox be on deck all the time to direct every activity of the firm.

However, Cox doesn't necessarily recommend that his philosophy be adopted by all contractors heading a business of similar size.

Contractors' Interests Will Vary Widely

"Some contractors are personally interested in selling," he says. "Other I know have a personal liking for engineering aspects of the business, and some are just so constituted that they have to be directly involved in every detail of the business. I just happen to like to do it my way."

This approach, however, does give Cox time and opportunity to study the operations of his firm and devise ways of improving them.

When, for example, the company bought its National Cash Register accounting machine three years ago at a cost of $8,000, Cox had it delivered to the office he maintains at his home. There he studied and experimented with it for a month to learn what the machine could and could not do. As a result, certain refinements were added so that it can accomplish things the manufacturer never dreamed of, according to Cox.

With this machine bookkeeper Laura McKettrick does all the billing and accounting, coming up at the end of the day with such data as a profit and loss statement and net worth, accumulated labor, material, and sub-contract costs daily on jobs in process, and many other vital statistics.

Mechanically, the machine provides multiple totaling and calculating.

Most of the forms used with this machine, as well as the forms used in other phases of the firm's operations were devised by Cox and, in fact, printed by the firm, which has its own offset press.

Cox is the first to admit that this is perhaps almost as much of a hobby as a really essential part of the business, but he can cite some positive benefits derived from these interests.

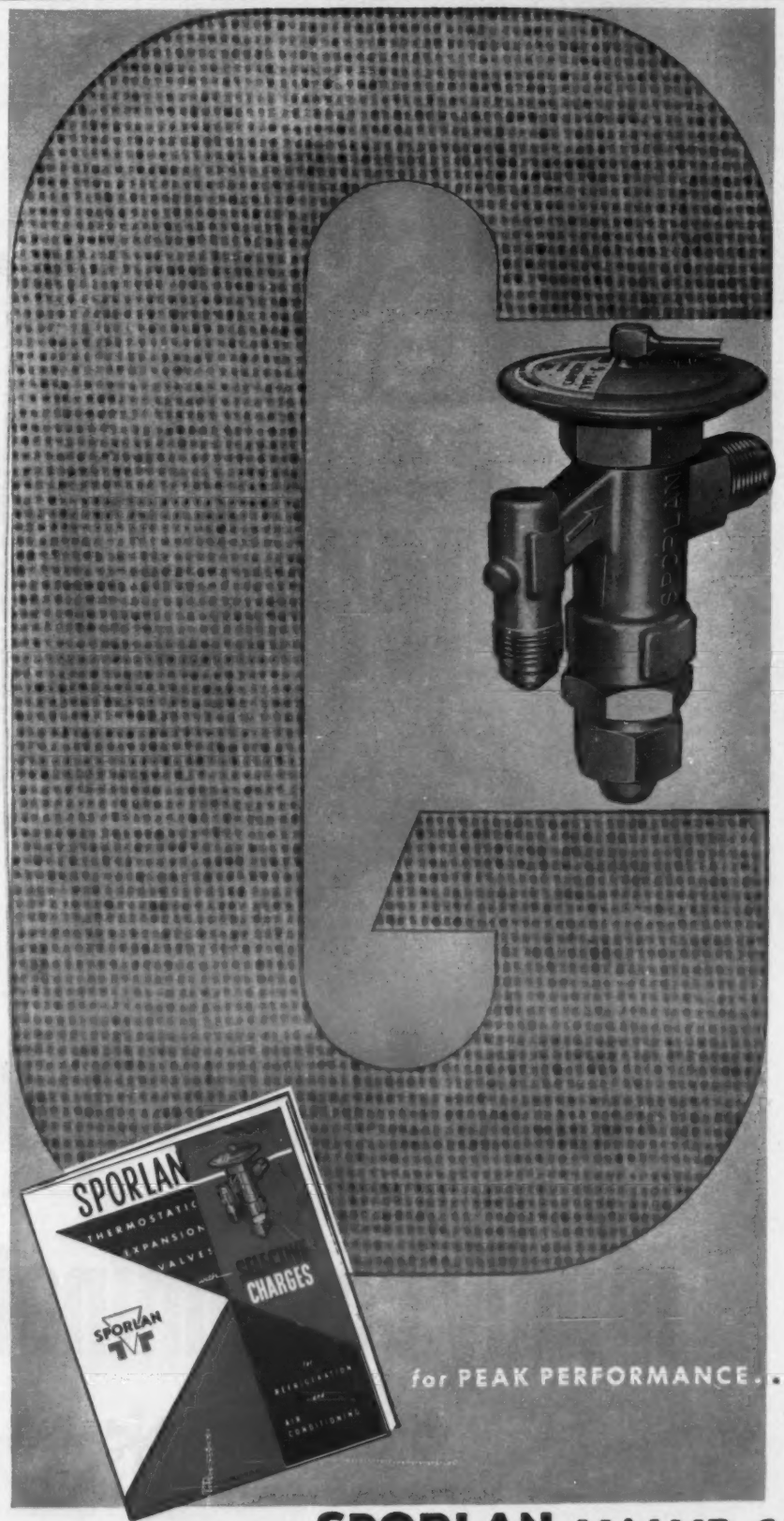
Most obvious thing about the firm that first impresses people, however, is the appearance of its buildings, which are located

(Continued on next page)

AT CLOSE of business every day, contractor Sig Cox (l.) knows his exact cash position, thanks to a mechanical bookkeeping machine he adapted to fit the firm's needs. Here he checks some important fiscal data with M. A. "Mike" Cox, Jr.

'Fact Finder'

THIS bookkeeping machine operated by Laura McKettrick cost $8,000, but with it Augusta, Ga. contractor Sig Cox probably keeps closer tab on the financial status of his business than any other contractor in the country.



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G VALVES...
the No. 1 choice for Refrigerated Cases,
utilize
SPORLAN SELECTIVE CHARGES...
famous since 1934

SPORLAN "C" CHARGE
for Suction Temperatures Above ZERO

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SPORLAN "X" CHARGE
for Extremely Low Temperatures

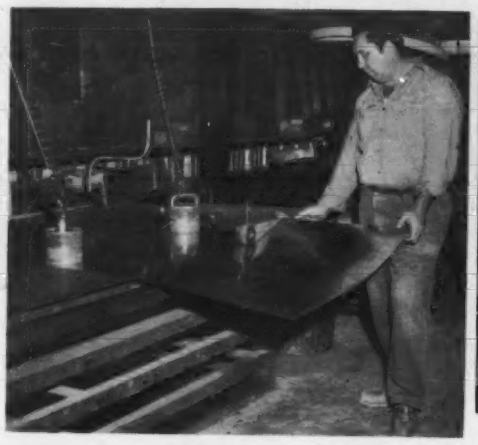
More engineering features are incorporated in the Sporlan G valve than in any other valve . . . yet the basic design has always been sound . . . and has never been changed.

Modifications will always be made, but only to improve the valve . . . never to change it.

on all refrigeration applications, send for new bulletin 10-10 today . . . then order your G valves from your friendly Sporlan Wholesaler.

SPORLAN VALVE COMPANY
7525 SUSSEX AVENUE ST. LOUIS 17, MISSOURI
EXPORT DEPT. 85 BROAD STREET NEW YORK 4, N. Y.

GOOD appearance is good advertising, Sig Cox believes, so the firm's buildings are attractive both on the exterior and interior, and employes like Laura McKettrick, bookkeeper, and Nita Amerson, secretary, add to the over-all effect.



POWER tools like this "Ductmaster" (which has some added refinements) enable Henry Jones, foreman of the sheet metal shop, and his assistant to turn out an amazing amount of work at surprisingly low cost.

ALL AIR conditioning ductwork gets inside insulation at the Sig Cox firm where this setup lets E. B. Corby apply adhesive and insulation efficiently before the sheets are formed into ductwork.

SPOT WELDER is just another example of reducing machinery favored by the firm.

Appearance Vital--

(Continued from preceding page)

on one of Augusta's busiest boulevards.

"When we put up our new building here in 1956 we spent an extra $15,000 to dress it up with Roman brick, etc.," Cox explains, and he's convinced this additional expense has more than paid for itself in advertising.

Display Space Cut For More Offices

The main building has 4,800 sq ft of floor space. Extending across most of the front of the building is a showroom. Recently, however, the depth of the display area was reduced almost by half when several offices were added.

Originally much of the display area was devoted to display cases and other fixtures, which require considerable floor space, but, like many another independent contractor, Cox has found fixtures becoming a smaller and smaller factor in his over-all business.

In fact, 90% of the firm's activities are now in mechanical contracting, including plumbing, and service, with heavy emphasis on air conditioning, he says.

Plumbing is a recent addition to the "stable," the company having bought out the plumbing business of William James and hired him.

"This gives us flexibility in mechanical contracting jobs as well as complete control over the work, not to mention the fact that now we don't have to argue with a plumbing contractor," Cox declares.

Similar thinking led to the expansion of the firm's sheet metal shop. Formerly it occupied a small section of the main building, but now it's in a 4,000-sq ft building of its own next door.

Firm Aims to Reduce Production Costs

All this is part of the firm's general aim to cut production costs so that volume can be increased and the percentage of overhead reduced.

"We used to think of overhead in terms of dollars and cents, but now it's in percentage," comments M. A. "Mike" Cox, Jr., office manager.

Another basic approach to the problem of cutting production costs is to do as much planning, engineering, and shop work as possible to minimize time required in the field by the crews of Mel Cunningham, installation manager; W. B. Lee, welding and piping foreman; and Leonard Garvin, sheet metal erection foreman.

"We try to do everything we can for an installation on the drawing board and in the sheet metal shop because it's hard to get enough really competent field men today," Cox says.

Even work on the drawing board and in the shop, moreover, has been organized and coordinated to save time and therefore cut costs.

For the most part detailed layout drawings with superb draftsmanship are turned out by David Jennings, who had considerable practical field experience before getting into this phase of the business. On co plicated jobs Jennings mal isometric drawings so the stallers can readily see h things go together.

While such isometric dra ings take time, they save m time and money in the field.

In laying out ductwork,

Ready soon-see you

NEW! Simple field tes for hermetic burnout

plus

NEW! Easy way to clean ou mildly contaminated system

* Full information on these important new developments—plus test kits and pressurized cylinders of "Genetron" 11—will be available from your wholesaler about March 15. See him then!

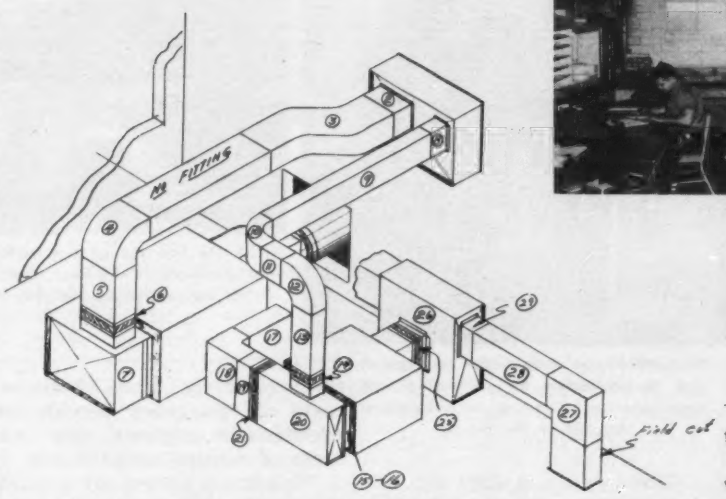
Producing Ductwork Efficiently--

firm has developed a system of "standard" duct sizes and lengths and fittings which are referred to by number or letter. This has several advantages.

Sales engineers Cooley Gunter and Irwin Pruett, for example, can use these references in working up an estimate on a job; the draftsman uses them in preparing drawings; the sheet metal shop knows exactly what is required, and they simplify things at installation.

Special fittings or transitions are drawn up in detail, but it's surprising how few of these are needed on the average job.

Another procedure that cuts installation time is the numbering of each piece of ductwork on the drawing. A corresponding number is marked on the duct sections and fittings. With a blueprint of the drawing in hand, an installation crew finds things go together quickly.



IF AN installation is complicated, draftsman David Jennings turns out beautiful isometric drawings like this one to simplify (and reduce costs of) field erection. Numbers here are marked on the pieces themselves, so there's no question about what goes where.

MORE replacement parts are stocked by the Sig Cox firm than can be found in the stores of many wholesalers because service is an important and profitable phase of its business. Here parts manager Richard "Duke" Muns checks the perpetual inventory.

MATERIALS needed for specific jobs are accumulated in these bins. Outdoors to the right is a hydraulic-lift loading platform for handling heavy equipment.

The use of "standard" ductwork also greatly simplifies things for the sheet metal shop. Foreman Henry Jones and his assistant E. B. Corby can turn out an amazing amount of work between them, thanks in no small part to repetitive production of identical items.

Power Machines Save Labor & Money

Extensive use is also made of time-saving machinery and methods in the sheet metal shop, which is likewise geared to hold scrap to an absolute minimum. Such power machines as the "Ductmaster," for example, permit sheets to be cut and notched without first ruling layouts with the system in use. Power brakes, shears, hammers, and such other devices as a spot welder might seem out of place in a shop of this size, but their use is strictly an economy, Cox believes.

Considerable attention also is paid to the sizes of sheets and insulation purchased, for economies can often be effected in this area, says Cox.

In their spare time, the two men in the sheet metal shop will do such things as fabricate joining cleats out of scrap. Time spent in doing this is credited to a "labor inventory" which is then charged later to specific jobs at the rate of 10% of the direct sheet metal labor cost.

Incidentally, a pair of joining cleats of the right size is taped to each length of duct when it's completed. This measure saves quite a bit of time in the field.

Scales Used to Weigh Sheet Metal

"As another measure of cost control we actually weigh sheet metal duct on the scales," Cox discloses.

Control of all costs is, of course, vital for success in the contracting business. Estimating costs too high will lose sales while estimating them too low will cost money, as anyone in the business should know.

Purchasing is extremely important as a factor in controlling costs, especially on negotiated jobs, Cox points out. Paying too high a price is obviously unprofitable, but buying items the firm already has in stock is an unnecessary expense.

On almost every job of any size the average contractor almost invariably winds up with some left-over items like shut-off valves, a solenoid valve, etc., etc., despite the most careful planning. Last-minute changes in plans can account for some of this; delayed shipments and reorders also contribute to the situation.

With close control the number of such left-over items is held

(Continued on next page)

Genetron Wholesaler*!

General Chemical takes the guesswork out of hermetic burnouts

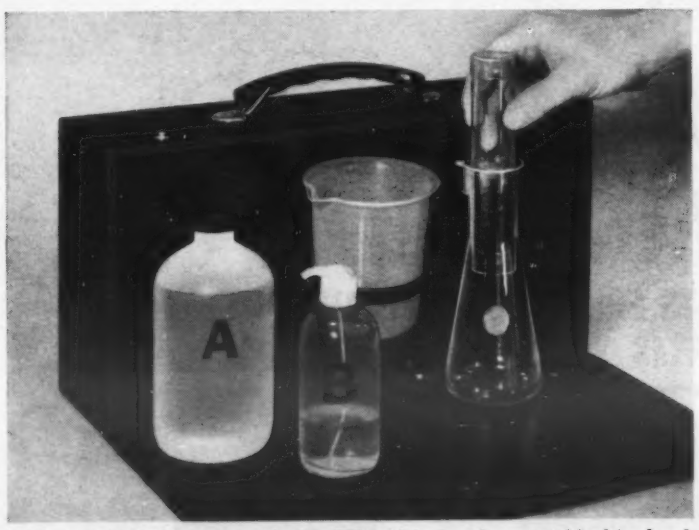
One of the oldest and toughest service problems in the refrigeration and air-conditioning industry has been licked!

Until now, there was no quick, on-the-spot test to determine the degree of acidity in a system after hermetic burnout . . . and there was no easy way to tell when the acid in a system had been cleaned out.

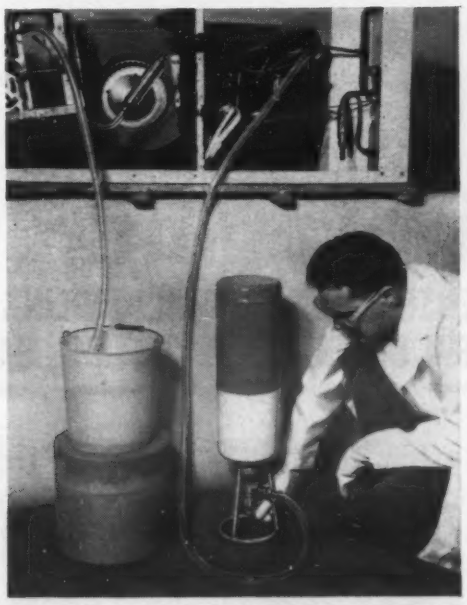
To solve this problem, General Chemical has developed the first simple field test for checking degree of contamination in a burned-out system—before and after cleanout. Yes—we've taken the guesswork out of hermetic burnouts.

In addition, General Chemical has developed an easy, short-cut procedure for cleaning out mildly contaminated systems by using pressurized cylinders of "Genetron" 11 to flush the unit—quickly and without pumping.

See how these new developments can save you time, labor and material costs:



First practical field test method! With this handy, portable kit developed by General Chemical, you can now quickly and easily determine extent of contamination in a system after hermetic burnout. Simple tests show extent of burnout contamination and what clean-up procedure should be used. Also show when cleaning is complete.



New quick, easy way to clean minor burnouts! Mildly contaminated systems can now be flushed and cleaned without pumping by using special new pressurized cylinders of "Genetron" 11 solvent. Prepared especially for flushing burnouts, these pressurized cylinders will soon be available from your wholesaler. An excellent solvent, "Genetron" 11 flushes acids and moisture, loosens and removes solids and is safe to handle.

Here is still another contribution by General Chemical to the advancement of the air conditioning and refrigeration industry. These new procedures will be demonstrated at meetings conducted by "Genetron" wholesalers, RSES chapters and other organizations, in the months to come.

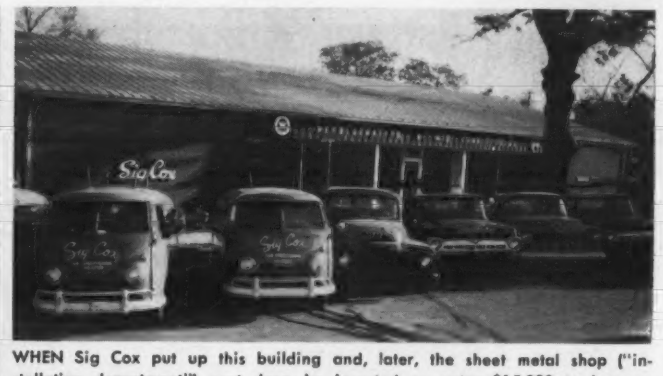
genetron®
super-dry refrigerants

Allied Chemical

GENERAL CHEMICAL DIVISION
40 Rector Street, New York 6, N.Y.

CONSIDERABLE shop service is performed, too, especially on window units, in this well equipped operation. Here James Simmons is working on a room air conditioner.

ADJOINING the shop proper is a roofed and floored section for performing such operations as cleaning of equipment brought in for repair.



WHEN Sig Cox put up this building and, later, the sheet metal shop ("installation department") next door, he invested an extra $15,000 to improve the appearance for the sake of advertising. It has paid off, he says.

$$ In Left-overs--

(Continued from preceding page)

to a minimum by a good contractor and therefore may have little bearing on the profit picture. Over a period of time, however, the accumulation of such items can become considerable.

At this firm these left-overs are carefully placed in stock bins and noted on inventory cards. Then when a bill of materials for a job comes through, Richard "Duke" Muns, the parts manager, checks it against the "left-over" parts on hand.

"On larger jobs we find we have as much as 15% of the needed parts in stock," Cox says.

These parts, along with other small items for a particular job, are assembled in large bins under a specific job number until they're needed on the job.

No inventory worth mentioning is maintained on bigger equipment such as air conditioners because these can usually be obtained from nearby distribution points on an overnight basis, Cox points out.

Keep Heavy Stock Of Repair Parts

An unusually large stock of repair parts is an important feature of the firm's operation, however.

Cox, who started the business in 1926 as an independent refrigeration serviceman, feels strongly on this subject.

"Having been a serviceman myself, I know how valuable it is to have the parts you need for service in your own stock," he says. "This saves time and money besides impressing your customers."

There are many racks of shelving in the parts department, which probably contains more parts and a greater variety than can be found in the stores of most wholesalers.

The rows are lettered and the individual compartments numbered to provide a quick indication of parts locations on the firm's perpetual inventory cards.

Whenever the quantity of a part in stock falls to the predetermined re-order point, the card is shifted to one side in the file, thus providing a visible indication of parts to be ordered.

"We try to hold the number of each item to a minimum but the variety of parts at a maximum consistent with use," Cox explains.

Service Makes Money

Not only is service an important part of the firm's operations but it's the most profitable end of the business, according to Cox. In addition to conventional service, the company goes in heavily for maintenance contracts, which produce the most profit in the service department.

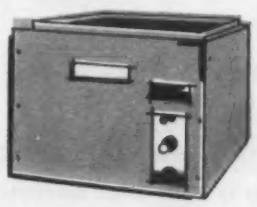
Close watch is kept by Bud Amerson, service manager, on the quality and cost of maintenance service. Through the company's record-keeping system a comparison is made between costs of emergency service on maintenance contract jobs and costs of routine maintenance.

"Too much emergency service means something is obviously lacking in our routine servicing of these jobs," Cox says, "and we take steps to correct it."

A well-equipped shop is provided for repairing refrigeration and air conditioning units ("we do a big business in window unit repairs"), and adjoining the shop is a roofed-over area where such operations as steam-cleaning of units are carried on.

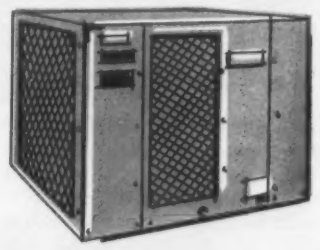
GM Delco

ANNOUNCES
A NEW AIR CONDITIONING LINE
CENTRAL RESIDENTIAL COOLING UNITS FOR EVERY TYPE AND SIZE OF HOME, NEW OR OLD! THE ENTIRE MARKET IS YOURS WITH THE GM-DELCO LINE!



COOLING COIL (EVAPORATOR) UNIT
Now there's a Delco-engineered air conditioning unit to fit any Delco furnace. Installation is quick and simple. Also, you can convert your customer's present forced air furnace to central air conditioning with just the right GM-Delco unit to make it easy, practical and profitable!

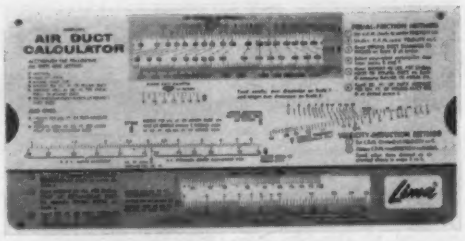
REMOTE CONDENSER UNIT
The GM-DELCO line includes attractive, weatherproof condensing units in sizes to meet a wide range of needs. Durably built for outdoor installation and designed for the most efficient operation. Ratings from 22,000 to 56,000 BTU/HR. Maximum over-all dimensions—Height 28¾", Width 48⅝", Length 31⅞".



SELF-CONTAINED SYSTEMS
The GM-DELCO line offers you completely self-contained cooling units. Shown is a type for use with hot water, steam or other heating systems without duct work. Easily installed in attic or crawl space with inexpensive duct work.

THE GM-DELCO HEAT PUMP
The GM-DELCO Heat Pump (not shown) is available as a self-contained or split system and provides both heating and cooling as required.

A COMPLETE LINE OF AIR CONDITIONING, HEAT PUMPS, FURNACES, BOILERS AND WATER HEATERS TO MEET ALL YOUR REQUIREMENTS.



LIMA REGISTER'S air duct calculator is said to eliminate much of the calculating necessary to the installation of duct and grilles.

'Slide Rule' Aids In Reducing Calculations For Air Duct and Grille Installations

LIMA, Ohio — Lima Register Co. has introduced a new slide rule-like calculator aimed at reducing calculations normally required by air duct and grille installations.

"At one setting, the calculator gives accurate readings of friction, velocity in feet per minute, weight per lineal foot or round duct, and surface area in square feet per lineal foot of round duct," the company pointed out. "The 4-in. by 8½-in. calculator also gives the computations in terms of rectangular duct as well as B & G gauge galvanized steel. The back of the new calculator serves as a register and grille selector."

The calculator is available at $1 through Lima wholesalers or may be purchased direct from the Lima Register Co., Lima, Ohio.

Payment should be included with the order.

FTC Examiner's Order Would Dismiss Restraint of Trade Charges Based on 'Exclusive Territory' Deal

WASHINGTON, D. C. — A Federal Trade Commission hearing examiner issued an order which would dismiss charges that Snap-On Tools Corp., Kenosha, Wis., has entered into and enforced illegal restraint of trade agreements with its independent dealers.

The company manufactures and distributes mechanics' service tools and related equipment. The order was contained in an initial decision by Examiner William L. Pack. This is not a final decision of the Commission and may be appealed, stayed, or docketed for review.

The examiner's ruling was on the FTC's complaint of April 10, 1958, which alleged that the agreements contained the following restrictive provisions: (1) each dealer must confine sales to his alloted territory; (2) he may sell only at the retail price fixed by Snap-On; (3) he is not allowed to sell to certain persons or firms named in his agreement; and (4) his agreement may be terminated at any time, and he is forbidden to engage in a similar business in the same state for one year after termination.

Examiner Pack held that "the complaint has not been sustained except as to the issue of the geographical limitation upon the right of former dealers to engage in a similar business, and that as to this issue an order to cease and desist is unwarranted in view of the discontinuance of the restriction."

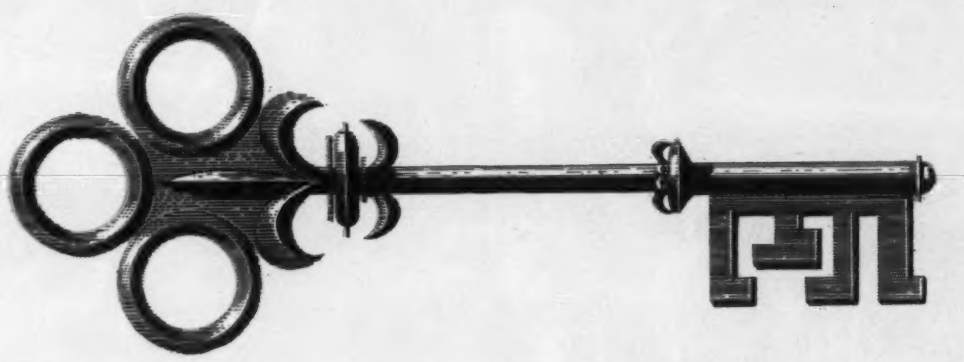
The real issue about which this proceeding centers, however, is the matter of exclusive territories, the examiner said. In fact, he added, "it is the only real controversy remaining in the case, as the other challenged provisions in the agreement have already been eliminated by respondent.

"Fundamental to consideration of this issue is the fact that competition in the sale and distribution of tools and equipment such as are here involved is very keen. There are many sellers in the field; the industry is highly competitive. The only possible adverse effect of respondent's exclusive territory policy upon competition is that prospective purchasers are unable to play off one Snap-On dealer against another in the hope of obtaining a lower price. This would seem to be of little practical consequence in view of the fact that there are any number of sources available from which the purchaser can supply his needs.

"As the examiner understands the authorities, the maintenance of exclusive territories by a seller certainly is not unlawful per se. On the contrary, the practice is unlawful only if it forms a part of a general plan or scheme which is unlawful. No such plan is involved here."

Furthermore, the examiner asserted, "there is merit in respondent's contention that the maintenance of exclusive territories is indispensable to the successful operation of its business; that 'confusion and chaos' would result if it were forced to abandon the policy. In the absence of the maintenance of a very large corps of salesmen employes, the practice of exclusive territories for its dealers appears to be the only way in which respondent can be assured that sales territories will be adequately worked, that periodic calls will be made on customers, and that satisfactory service will be rendered customers."

GM Delco



ANNOUNCES
A GREAT NEW FRANCHISE
THE GM-DELCO KEY DEALER PLAN

- **GENERAL MOTORS' NAME**—assures top flight engineering and a universally known reputation for Reliability.
- **DIRECT FACTORY-DEALER DISTRIBUTION**—planned sales, advertising, training and promotional aids.
- **LIMITED NUMBER OF DEALERS**—in each market, and only they can buy Delco equipment.
- **PROTECTED PRICING**—stable pricing with protection.
- **DEALER LISTINGS IN NATIONAL ADS**—insures your direct participation in dynamic advertising, at no cost.
- **COMPLETE SALES BUILDING PLAN**—with local advertising, prospecting, and selling plans to build your sales.
- **OVER 200 MODELS—PLUS ACCESSORIES**—GM-Delco gives you a model to meet your every need.
- **GENERAL MOTORS GROUP INSURANCE**—available to eligible dealers and their personnel.

GET THE FULL STORY RIGHT AWAY! WRITE TO DELCO APPLIANCE DIVISION, GENERAL MOTORS CORPORATION, ROCHESTER 1, NEW YORK.

GM Delco 365
CONDITIONAIR

Houston Parade of Homes Features Central Cooling

SAN ANTONIO—Central air conditioning was one of the features promoted during the recent 1961 Winter Wonderland Parade of Homes here.

This event, sponsored by the *San Antonio Light*, consisted of 30 different homes, all equipped with Fedders furnaces for heating and Fedders remote central air conditioning for cooling.

The homes, each built by a different builder in the San Antonio area, range in price from $18,000 to $55,000. Ten of the homes are in the $18,000-$20,000 category.

Three, 4, or 5-hp Fedders air conditioners have been used.

The Parade of Homes promotion, which ran through the entire month of February, was supported by advertising in the entire Hearst newspaper chain, local radio and TV commercials, a 56-page Sunday supplement in the *San Antonio Light*, and in the March issue of *House Beautiful* magazine.

Distributor In Air Conditioning

Teofani Says Faith In Distributor-Dealer Method Must Be Backed By Effective Promotion To Get Retail Sales

By Phil B. Redeker

MIAMI — In selling circles, there is an axiom pertaining to the analysis of a successful sales story. When paraphrased, it states that rarely anything new is done, but rather it is the proper application of basic fundamentals of selling, coupled with an up-to-date twist, through which success is achieved.

This idea is subscribed to wholeheartedly by Frank Teofani, formerly general sales manager for Carleton-Stuart Corp., Carrier distributor in New York City; and now president and owner of the Weathermatic Corp., an air conditioning distributorship which has made its mark in the Miami area in the past two years.

Teofani thinks that it is an unfortunate situation when manufacturers and distributors go the "price route" at the expense of sacrificing product and services. This is especially so, he says, when such a procedure is followed without first exploring how much might be done to improve their knowledge of distribution.

Distribution a Science

"Actually, distribution is a science and there are many phases where the surface has barely been scratched," he says.

The Miami area distributor states that he had two main considerations in setting up his organization, first to so establish it and to provide a plan of action that would provide maximum service to the dealer, and that this ultimately would provide the best service possible to the user of the products which the dealer sold.

His fundamental philosophy, however, is simply that the greatest rewards will be achieved by sticking to the accepted standards of distribution, and employing the basic fundamentals of selling which have proved successful over the years.

However, to achieve success with such a program, Teofani was in full realization that he must have personnel who not only had a good grasp of the fundamentals, but who could add those little extra twists that would enable them to assist the dealers effectively along the lines of good tangible service, engineering "know how," sales training, and aggressive advertising and sales promotion.

Hire Promotion Expert

What has Teofani done to get maximum advertising exposure for his complete line in the market, and to spur dealers to make a major effort to sell the products? The key moves were:

1. For the purpose of developing well-designed advertising and promotion campaigns with a central theme for each product line, he hired a full-time advertising and promotion manager in the person of Warren Bullis. An advertising graduate of the University of Miami, Bullis is well experienced in all media of the local market, and particularly in radio and TV advertising.

2. Making presentations of products and plans to dealers in carefully developed meetings, sometimes in the form of elaborate "shows" but all designed to get the dealer to leave the meeting with enthusiasm for whatever program was presented.

3. Creation of advertising and sales promotion which would bring about action on the part of the consumer to at least investigate the possibilities of the products offered by the dealer.

Get Wives Into Picture

4. Bringing the dealers' wives into the picture, making them interested in what their husbands were doing, and particularly having them on hand when any special incentive programs are being announced.

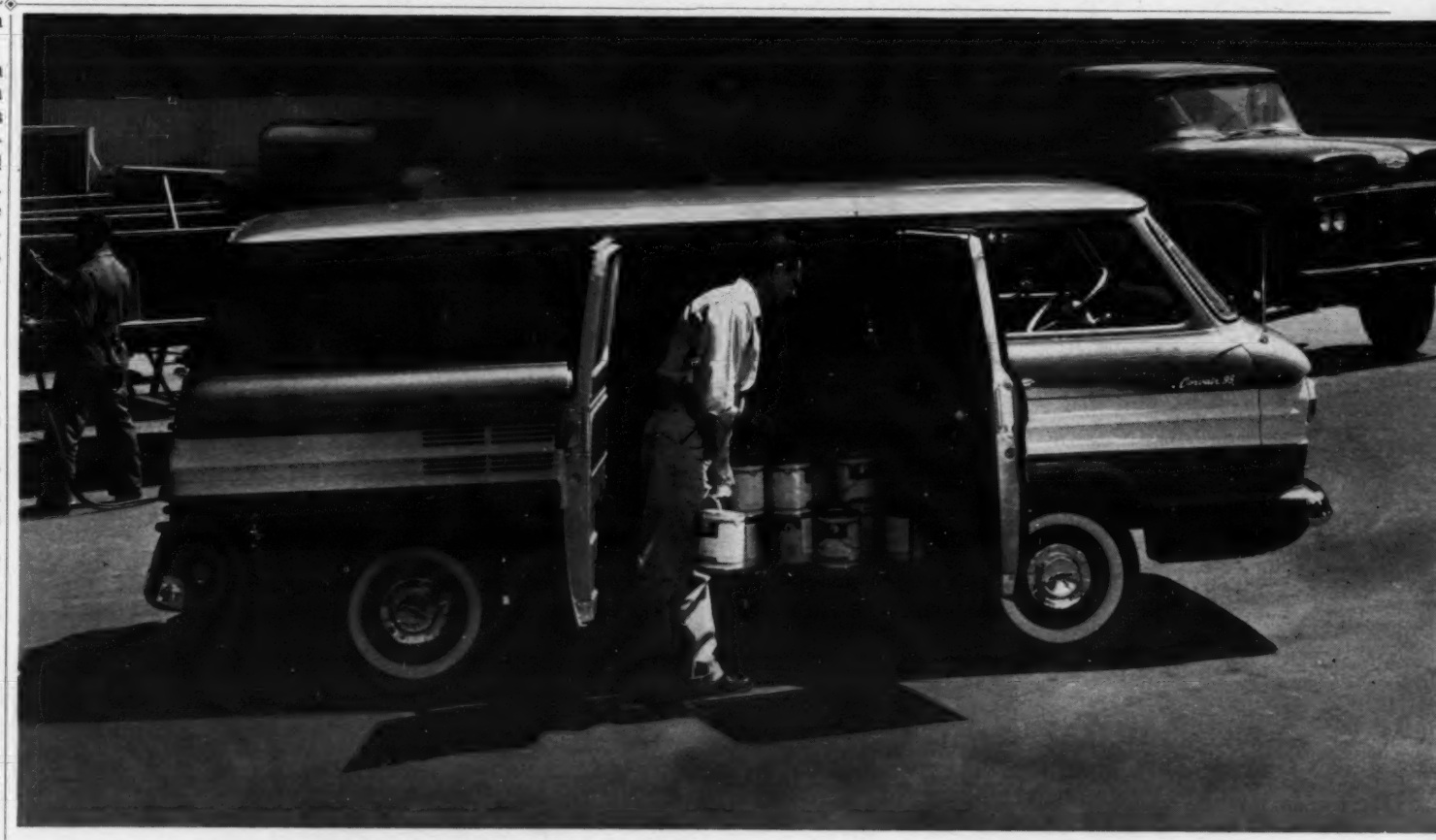
The presentation of incentive programs for 1961, for example, was a well-organized stimulating affair that combined a gala social evening for dealers and their wives with a dramatized presentation of the incentives for dealers who will meet or exceed certain quotas.

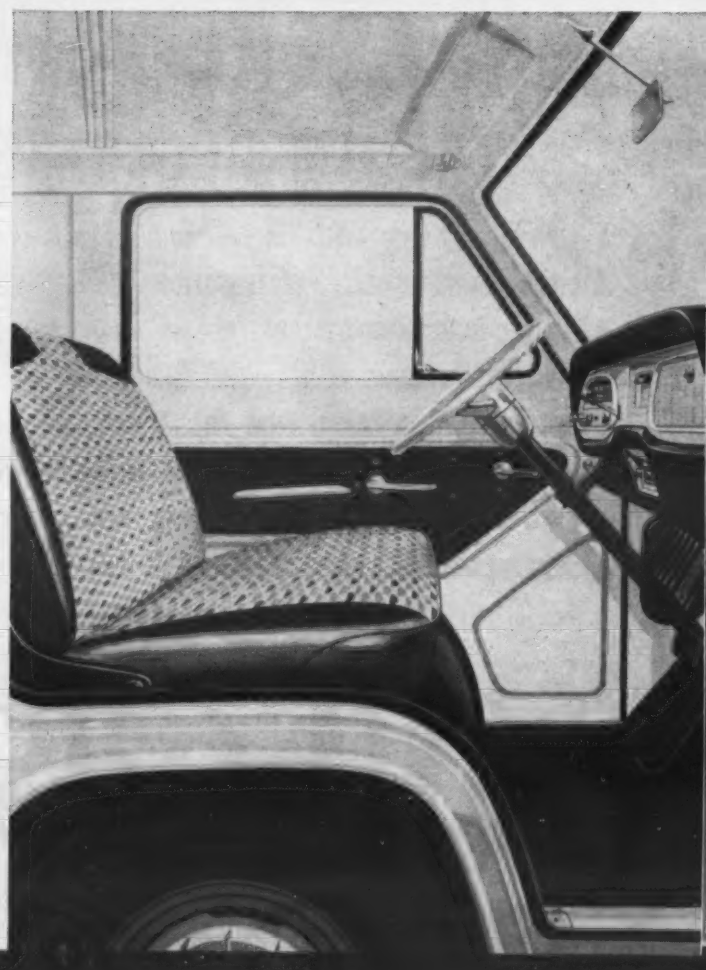
Held at one of the major Miami Beach hotels, the evening started with cocktails, fol-

Wives Get the Picture

DRAMATIZING THE REWARDS which dealers will receive for their sales effort in the coming year, Weathermatic Corp.'s Warren Bullis, advertising manager (right) stages a mock bullfight to stimulate interest in the Mexico City prize trip. A minimum of personnel other than that employed directly by the distributor was used in the skits.

INCLUSION OF WIVES in the presentation of sales program for the year insures their getting a good look at rewards such as a mink coat and sports sedan which their husbands can earn through sales achievements. Use of hotel's night club room permitted dramatic presentations such as having the automobile rise up on elevated stage. A dinner preceded the sales program presentation, dancing followed it.





lowed by dinner. After dinner came the "floor show" in which Bullis, working mainly staff members of the distributing organization (two girl models and the orchestra constituted the only outside talent) put on the dramatized presentation of the incentive program.

Use Skits In Meeting

Skits were staged to stimulate interest in the incentive trips to Mexico City, Hawaii, and Jamaica (a mock bull fight, as an example, being used in a comic depicting of the attractions in Mexico City).

Then came a presentation of the broad run of gifts available through the "shares" earned by dealer principals in purchase of Carrier equipment from Weathermatic Corp. While the audience was watching the slides depicting the gifts and listening to a taped commentary, the stage in the hotel night club room was lowered to the basement where a Mercedes 220-S sedan was rolled on the stage. At the end of the slide presentation this "ultimate" in gifts was elevated to the top stage level and rotated, while models modeled the fur coats which are another of the top "gifts" to be earned.

The advertising programs which Weathermatic has and is providing for its dealers are all designed to gain attention for whatever the particular advertisement is concentrating on, and in some instances direct action is called for on the part of the prospect.

'Ideas' In Promotion

Last year Bullis concentrated heavily on the use of spot radio announcements, which were purchased in bulk and used around the clock. Most of them were in a light, semi-comic vein, one theme being "Two Ways to Keep Cool" the one way being the sit-in-the-bathtub-with-a-fan-blowing-over-you method, and the other being with modern air conditioning. A similar campaign on heating, "Two Ways to Weep Warm" is being used this winter.

Another promotion offers the lure of "free heat" for this winter if a year-round system is purchased. Deferred payment plans are heavily emphasized.

An effective direct mail campaign to sell central heating was one directed at users of wall heaters, an offer being made to replace the wall heater with an attractive bookcase, if a central heating system were purchased.

But it is in the "Blockbuster" campaign being kicked off early this year that Teofani, Bullis, and Quincy P. Carvell, residential sales manager, expect to get some direct reaction from prospects, and the kind of leads that will end up in sales.

There is some significance to the name "Blockbuster" because the promotion effort will be built around an area saturation plan. The selected area will first be saturated with direct mail, and this will be followed up with telephone calls by dealer personnel.

Set Stage for Calls

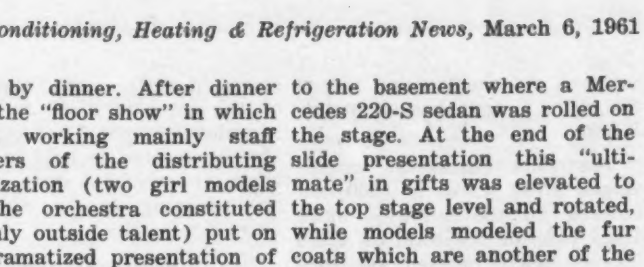
Personal calls will then be made on those prospects where sufficient interest to warrant such calls has been developed. Whenever a sales is made, a bonus gift offer will be made to the purchaser for prospect leads that will result in sales.

Thus, the program sticks to accepted standards of distribution and basic fundamentals of selling but with some new twists. Effective? In a little more than a half year when he started the business from scratches, Teofani had doubled business over the preceding 12-month period. And progress has continued upward.

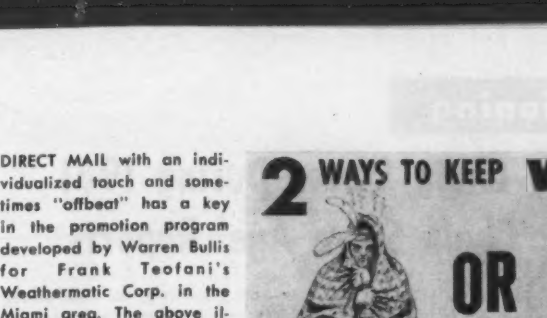
DIRECT MAIL with an individualized touch and sometimes "offbeat" has a key in the promotion program developed by Warren Bullis for Frank Teofani's Weathermatic Corp. in the Miami area. The above illustration is for a heating sales drive, a similar one being used for comfort cooling with a deferred payment plan being offered. A semi-humorous approach is also used in radio spot advertising.

NEW SPACE AND SPUNK AT LESS EXPENSE!

TOTALLY ★★★★★★ NEW CHEVROLET CORVAN MADE TO MEASURE FOR MORE EFFICIENT DELIVERY DUTY!



Measurably more load space than conventional half-tonners! Cargo area is almost 10 feet long, thanks to rear-engine design which eliminates the hood.



Corvan's rear-mounted "pancake" 6 measures only 17" high, top to bottom; it allows maximum load space in truck interior and lower loading height; and it packs plenty of power to boot!

■ Size up a new Chevy Corvair 95 Corvan and you'll see scores of features and dimensions that measure up to a new standard of profit-producing performance. Look at the whopping-big load space, for instance, made possible by the efficient rear-engine no-hood design. Or check the nearly *even* weight distribution, front and rear, that enables a Corvan to carry up to 1,700 lbs. of payload with a 4,600-lb. GVW.

Note, too, the short 95-inch wheelbase that pays off in nimble maneuvering and easy parking. And, while you're at it, try Chevrolet's newest engine, Corvan's rear-mounted aluminum Turbo-Air 6. Feel its fleet power and don't forget that it never needs anti-freeze or radiator repairs! (Tucked between the rear wheels, it stays out of the way and stays on top of fuel costs, too.)

But above all, don't miss the *quality* that's been engineered into this new panel. It shows up everywhere, but particularly in the chassis and body construction. In the tough integral floor-frame assembly, in the smooth independent 4-wheel suspension, and in built-to-last features like the two-position metal door checks and sturdy double-walled doors.

For eye-opening evidence of Corvan's unmatched utility, take a tape with you when you visit your Chevrolet dealer's and measure these advantages for yourself:

SPACIOUS DRIVER COMPARTMENT. Wide, unobstructed floor, plenty of leg room and head room. Full-width seat, 59¼" wide, is optional at extra cost.

BIG SIDE DOUBLE DOORS. They open so wide that you can load a 4' x 4' crate with ease! (Right-side doors standard; left-side doors optional at extra cost.)

EASY-LOADING REAR DOORS. These double doors are big enough (and open wide enough!) to make rear-end loading a breeze!

LOW LOADING HEIGHT. Only 16¼" at the side, only 29" at the rear (unloaded). Saves you work!

HIGH INTERIOR. Interior height is a full 4½ feet; that means more convenient cargo handling.

Your Chevrolet dealer can brief you fully on this new answer to more profitable deliveries, so see him soon. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

1961 CHEVROLET STURDI-BILT TRUCKS CHEVROLET

Hupp Shifts Effect Closer Liason With Divisions

CLEVELAND — Hupp Corp. has realigned its organization structure along group lines to effect closer liaison between the corporate staff and a rapidly increasing number of operating divisions, Don H. Gearheart, president, announced.

A. J. De Fino

R. N. Ward

Hupp now has 13 operating divisions, five of which have been added through acquisition since mid-1960.

To reduce the number of divisions reporting directly to the president, two group vice presidents have been elected by Hupp directors. They are Anthony J. De Fino, Hupp vice president and general manager of the Perfection Div., and Robert N. Ward, assistant to the president.

De Fino has been with Hupp since 1957. Previously he was vice president and general manager of Servel, Inc.'s All-Year Air Conditioning Div. and vice president and general manager of Fedders-Quigan (now Fedders) Corp.'s Buffalo division.

Ward has been assistant to the president since 1956, acting also as managing director of Hupp Nederland N. V., Hengelo, Holland, from 1957 to 1959.

York Ups Pierce

YORK, Pa. — The promotion of E. R. Pierce from manager of York Contractors to general manager, packaged product branches, has been announced by Austin Rising vice president and director of marketing for the York Div. of Borg-Warner Corp.

E. R. Pierce

Pierce succeeds Lloyd D. Wasson, who has retired after 22 years with York.

Plan To Air Condition 13,050 Chain Stores During 1961 At a Cost of $138,500,000, 'Chain Store Age' Reports

NEW YORK CITY — The chains air conditioned 12,900 stores in 1960, at a cost of $130,300,000, and plan to air condition 13,050 stores in 1961, at a cost of $138,500,000, according to a *Chain Store Age* survey.

The survey is based on reports from 395 chains operating a total of 22,483 stores.

The 1960 expenditure was 12.5% higher than the 1959 expenditure, although the total number of new air conditioning installations decreased by 2.4%, it was pointed out. This reflects the fact that somewhat larger store areas were air conditioned in 1960, the survey report said.

In 1960, 10,130 new chain stores were built and 12,050 were substantially remodeled—a total of 22,180 store projects. Of that total, 12,900, or some 51%, were air conditioned.

For 1961, 10,790 new chain stores are planned, in addition to 11,375 major remodelings—a total of 22,165 projects. Of that total, 13,050 will be air conditioned—about 59%, the survey found.

Virtually 100% of the new chain stores opened are air conditioned, says *Chain Store Age*. About one-fourth of the major remodelings call for the addition of air conditioning. In most branches of the chain store business, a major remodeling involves air conditioning unless the store already has an installation.

The **food chains** air conditioned 3,700 stores in 1960, according to the survey — more than 75% of the total of 4,900 stores newly opened or substantially remodeled. In 1961, the food chains plan to air condition 3,600 stores, or 75% of the total of 4,800 stores to be opened or remodeled.

The **variety store chains** continued in 1960 their programs of air conditioning virtually every new store and a high percentage of remodeled units. The survey says they air conditioned 1,500 stores in 1960—more than 83% of the total of 1,800 new and remodeled stores. That percentage is expected to hold in 1961, when the variety store chains are planning to air condition some 1,550 units.

The **drug chains** air conditioned 1,050 stores in 1960—more than 87% of the total of 1,200 units built and remodeled. In 1961, according to *Chain Store Age*, they plan to air condition 950 stores — more than 86% of the total of 1,100 stores to be built and remodeled.

The **restaurant chains** will air condition a higher percentage of new and remodeled stores in 1961 than in 1960, the survey shows. The 1,500 units air conditioned in 1960 represented 65% of the total of 2,300 new and remodeled stores. In 1961, 1,400 units will be air conditioned—70% of the total of 2,000 new and remodeled stores projected for the year.

General merchandise-department store chains air conditioned 550 units in 1960—about 43% of the total of 1,230 stores opened or remodeled in the year. The survey indicates that they expect to air condition 650 units in 1961—more than 45% of the total of 1,430 new and remodeled units projected for the year.

Apparel chains air conditioned 1,200 stores in 1960—70% of the total of 1,700 stores opened and remodeled in the year. For 1961, says *Chain Store Age*, they plan to air condition 1,000—or more than 75% of the 1,330 stores to be built and remodeled.

Auto supply-hardware chains air conditioned 800 stores in 1960—or 57% of the total of 1,400 stores built or remodeled in the year. They plan to air condition 900 stores in 1961—or 60% of the total of 1,500 stores to be built and remodeled, the survey shows.

Chains in other fields accounted for 2,600 air conditioning installations in 1960—or 34% of the total of 7,650 stores built and modernized. In 1961, these companies plan to air condition 3,000 stores—or 36% of the total of 8,175 units to be built and remodeled.

The *Chain Store Age* survey of air conditioning has been made annually since 1949, following the same procedure. Reports from the chains are the sole basis for the estimates.

"A conservative guess may be made, however, that an additional expenditure of about 25% is not reflected in the reports from the chains," it was pointed out. "That would account for some of the expenditures made by landlords in behalf of the chain — expenditures on which a number of chains could not report accurately.

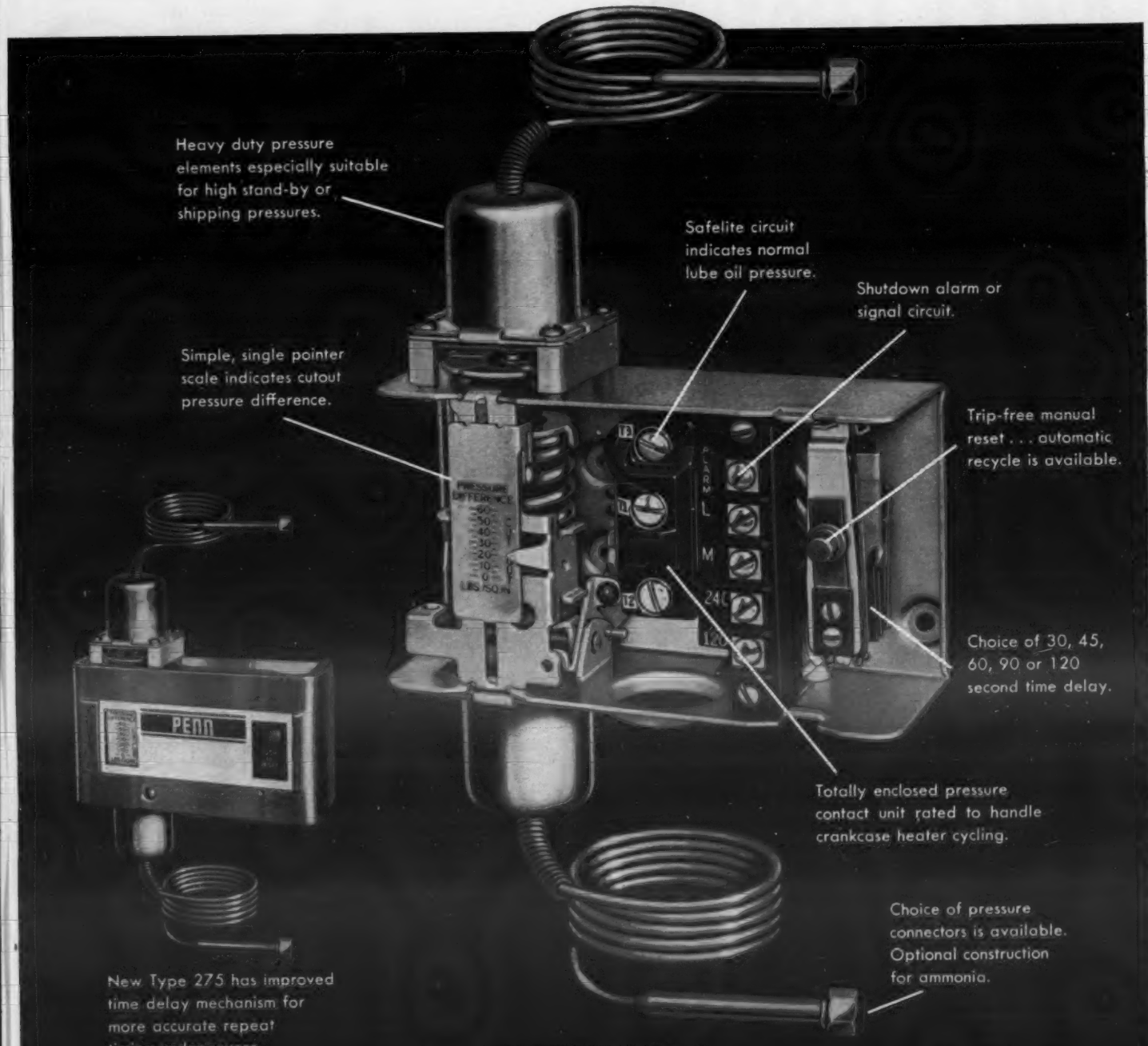
"Thus, the total expenditure for chain store air conditioning in 1959 was about $145,800,000. The 1960 expenditure was in the neighborhood of $163,000,000, and the 1961 expenditure will probably hit $173,000,000.

"The cost of air conditioning installations for each of the three years is just under 9% of the total expenditure for building, remodeling, and equipping chain stores."

NOW

BETTER THAN EVER!

New Type 275 is the sure way to stop slow pickup or loss of lube oil pressure from crippling pressure-lubricated refrigeration compressors . . . get the complete story from your wholesaler!


Heavy duty pressure elements especially suitable for high stand-by or shipping pressures.
Safelite circuit indicates normal lube oil pressure.
Shutdown alarm or signal circuit.
Simple, single pointer scale indicates cutout pressure difference.
Trip-free manual reset . . . automatic recycle is available.
Choice of 30, 45, 60, 90 or 120 second time delay.
Totally enclosed pressure contact unit rated to handle crankcase heater cycling.
Choice of pressure connectors is available. Optional construction for ammonia.
New Type 275 has improved time delay mechanism for more accurate repeat timing under severe vibration conditions.
PENN

PENN CONTROLS, INC. Goshen, Indiana

EXPORT DIVISION: 27 E. 38th ST., NEW YORK, N.Y.

AUTOMATIC CONTROLS FOR HEATING, REFRIGERATION, AIR CONDITIONING, APPLIANCES, PUMPS, AIR COMPRESSORS, ENGINES

Heat Pumps

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities Cooling (Btuh)	Capacities Heating (Btuh)	Heat Source	Refrig. Charge (Lbs)	Water Usage (gpm/ton)	Outside Coil Face Area (Sq Ft)	Outside Coil Rows Deep	Outside Coil Cfm	Outside Coil Blower Hp	Inside Coil Face Area (Sq Ft)	Inside Coil Rows Deep	Inside Coil Cfm	Inside Coil Blower Hp	Compressor Make	Compressor Hp	Compressor Comp. Mfrs. Model No.	Kw Input Total	Locked Rotor Amps	Defrost Control Type	Air Filter Dimensions	Net Weight
Addison (Private Brand)—Addison Products Co., Addison, Mich.																								
*PA22H-A1	23	29⅞	29¼	20,000†	20,000	Air	2.8	—	4.0	3	1,600	1/2	1.9	3	750	½	Tecumseh	2	B21U18	3.0	64.6	—	—	265
*PA30H-1	26	32	49¾	30,000†	27,000	Air	5.3	—	4.9	4	2,350	1/3	2.8	3	1,100	¼	Tecumseh	3	PJG300	4.65	85.1	—	—	415
*PA40H-4	26	32	49¾	38,000	38,000	Air	6.6	—	4.9	4	2,350	1/3	2.8	4	1,400	⅓	Tecumseh (2)	2	B21U18	5.9	73.5	—	—	490
*PA60H-1, 2	37	43	57½	56,000†	53,000	Air	10.5	—	9.0	4	3,400	1/3	3.75	4	1,800	½	Tecumseh	5	PFB50	8.2	146.3	—	—	700
*37ACH	38⅝	38⅛	31⅝	34,000†	32,000	Air	9.0	—	6.75	3	2,000	1/5	2.46	4	1,200	⅓	Tecumseh	3	PJE300	4.71	83.8	—	20x25x1	340
*60ACH	33¼	48⅜	31⅝	56,000†	54,000	Air	13.7	—	7.6	4	4,400	(2) 1/3	4.6	4	2,000	⅓	Tecumseh	5	PFB500	9.2	141.2	—	(2) 16x22¼x1	502
*90ACH	73⅝	101⅝	40	90,000†	92,000	Air	—	—	21.5	3	10,000	(3) 1	7.2	4	2,800	1	Copeland	7½	MR50-781	11.2	145.0	—	(3) 16x20	1475
*120ACH	73⅝	101⅝	40	110,000†	110,000	Air	—	—	21.5	4	9,600	(3) 1	8.9	4	4,000	1½	Copeland	10	9R5-1000	13.3	180.0	—	(3) 20x30	1545

†Rated under ARI standard. Models 90ACH and 120ACH are sold under Addison label, others are sold for marketing under private brand.

AFCO Comfortimaker—American Furnace Co., 1300 Hampton Ave., St. Louis 10, Mo.																								
*AHP23	34½	28¼	47¼	21,000†	23,000†	Air	3#4	—	3.34	2	1,700	1/10	2.3	3	800	⅛	Tecumseh	2	B21U18	2.93	55	P D	—	425
*AHP34	34½	32¼	55¼	34,000†	37,200†	Air	5#3	—	4.7	4	2,400	1/4	3.43	5	1,200	⅓	Tecumseh	3	PJE301	4.9	78	P D	—	530
*AHP34-3	34½	32¼	55¼	34,000†	37,200†	Air	5#3	—	4.7	4	2,400	1/4	3.43	5	1,200	⅓	Tecumseh	3	PJE301	4.9	68	P D	—	530

†Rated under ARI standard.

Air Commander (Ambient Master)—K & B Distributors, 2119 So. Atlantic Blvd., Los Angeles 22, Calif.																								
35FHP 1, 3	36½	65½	32½	35,800†	34,700‡	Air	10#	—	5.8	3	3,600	1/4	3.3	3	1,200†	¼	Tecumseh	3	PJE301	4.5	73/75	P D	16x20x1	625
48FHP 1, 3‖	35	78½	32½	48,800†	47,300‡	Air	12#	—	8.3	3	4,800	1/3	4.4	3	1,600†	⅓	Tecumseh	4	PFB403	5.9	110/78	P D	16x25x1	820
58FHP 1, 3‖	43	73	40	61,000†	61,400‡	Air	14#	—	10.0	3	6,000	3/4	5.5	3	2,000†	¾	Tecumseh	5	PFB503	7.8	125/90	P D	20x25x1	1039
86FHP 3‖	43	108	40	86,200†	88,800‡	Air	16#	—	15.0	3	9,000	1	8.0	3	3,000†	¾	Copeland	7½	MR50-781	9.4	145	P D	(4) 16x20x1	1378
112FHP 3‖	43	144	40	116,000†	116,000‡	Air	22#	—	20.0	3	12,000	(3) 3/4	11.0	3	4,000†	1	Copeland	10	9R5-1000	11.8	180	P D	(4) 20x25x1	2000
193FHP 3‖	43	217	40	188,000†	192,000‡	Air	32#	—	30.0	3	18,000	(3) 3/4	16.5	3	6,000†	1½	Copeland	15	4R49-2006	18.5	250	P D	(6) 20x25x1	2854

†Cooling conditions rated 95°—80° db, 67° wb. ‡Heating conditions rated 70° return air, 45° outside air temperature. §Available 220/208/440 volt. ‖Variable.

Airtemp—Airtemp, Div. of Chrysler Corp., P. O. Box 1037, Dayton 1, Ohio																								
3104-00	30⅝	46	28⅞	34,000	34,000	Air	4#11	—	3.34	4	1,650	1/3	2.31	3	1,100	¼	Tecumseh	3	PJE300	5.59‖	80	P D	—	506
3204-00	33⅛	32	45	33,000	32,000	Air	Holding	—	7.35	3	2,900	1/3	—	—	—	—	Airtemp	3	3003-3	4.59‖	80	P D	—	380
1454-00	—	—	—	—	—	—	—	—	—	—	—	—	3.2	3	1,200	⅓	—	—	—	—	—	—	16x25x1	280
3206-00	46¼	32	45⅝	58,500	51,000	Air	Holding	—	14.7	2	4,700	1/2	—	—	—	—	Airtemp	5	3006-02	—	105	P D	—	555
1476-00	—	—	—	—	—	—	—	—	—	—	—	—	7.15	3	2,000	⅓	—	—	—	—	—	—	(3) 16x20x1	374

‖For cooling.

Amana—Amana Refrigeration, Inc., Amana, Iowa																								
*PKH224-1	31½	30	40	24,000†	26,150†	Air	3#6½	—	2.64	4	1200/1,100‖	1/2**	1.88	4	950/850‖	¼**	Tecumseh	2	B21U18	3.61	55	T D	—	399
*PKH336-1, 3	35½	34	45½	38,000†	36,650†	Air	5#3	—	3.58	5	1850/1,775‖	1/2	2.67	4	1350/1,000‖	⅓	Tecumseh	3	PJE300	4.625	78/75	T D	—	429
*PKH448T-1B	31½	40¼	64⅞	48,000†	52,400†	Air	7	—	5.0	5	2750/2,550‖	(2) 1/3	3.75	4	1630/1,330‖	½	Tecumseh (3)	3	B21U18	6.553	55 ea.	T D	—	667
*PKH560T-1A, 2A	31½	40¼	71	61,000†	66,500†	Air	9	—	6.25	5	3300/3,100‖	(2) 1/2	4.17	5	2230/1,940‖	½	Tecumseh (3)	2½	PJG300	8.425	60 ea.	T D	—	839

†Rated under ARI standard. ‡3#11 on first stage, 3#4 on second stage. §5#4 on first stage, 4#10½ on second stage. ‖Cfm range .00"/.20" ext. s.p. ¶Cfm range .00"/.40" ext. s.p. **Motor serves both evaporator and condenser blowers.

American-Standard—American-Standard Air Conditioning Div., 40 West 40th St., New York 18, N. Y.																								
*ACPR 20	26½	29¼	20¼	20,000	20,000	Air	2#8½	—	4.0	3	1,600	1/2‡	1.9	3	820	½‡	Tecumseh	2	B21T18	—	—	T/T	16x25x1	285
*ACPR 30	29½	32	49¾	30,000	27,000	Air	5#3	—	4.9	4	2,350	1/3	2.8	3	1,240	¼	Tecumseh	3	PJG300	19.8	74	T D	24x12	415
*ACPR 38	29½	33	49¾	38,000	38,000	Air	6#10	—	4.9	4	2,350	1/3	2.8	4	1,530	⅓	Tecumseh (2)	2	B21U18	12.6 ea.	55 ea.	T D	28x12	490
*ACPR 56	37	42	57½	56,000	53,000	Air	11#12	—	9.0	4	3,400	1/3	3.75	4	1,940	½	—	—	—	—	—	—	—	590
AC-3BR	38⅝	38¼	31⅝	—	—	Air	Holding	—	6.73	3	2,000	1/5	—	—	—	—	Tecumseh	3	PJE300	21.0	78	T D	—	340
RC-3BR	21⅛	25	31⅝	34,000	32,000	—	—	—	—	—	—	—	2.66	4	1,100	⅓	—	—	—	—	—	—	20¼x16	110
AC-5BR	33⅝	38¼	31⅝	—	—	Air	Holding	—	7.64	4	4,400	1/3	—	—	—	—	Tecumseh	5	PFB500	31.5	127	T D	—	502
RC-5BR	28⅝	25	30	56,000	54,000	—	—	—	—	—	—	—	3.82	5	1,600	⅓	—	—	—	—	—	—	20¼x21¼	153

‡Single motor for indoor blower and outdoor fan.

Aqua Matic—Murray Hill Mfrs., Inc., 1136 N.E. Flagler Dr., Ft. Lauderdale, Fla.																								
*MH31A	51½	22	18	36,000†	54,200†	Water	3#8	2	‡	—	—	—	2.4	4	1,200	⅓	Tecumseh	2	B21U18	2.9	56	—	20x16x1	225
*MH41A	57⅜	28½	18½	48,500†	67,500†	Water	6#8	2	‡	—	—	—	3.0	4	1,400	½	Tecumseh	3	PJE300	4.6	78	—	27x17x1	400
*MH61A	63	34	22	76,000†	103,000†	Water	9#10	2	‡	—	—	—	4.7	4	2,400	⅔	Tecumseh	5	PFB500	6.3	127	—	32x20x1	725

†Based on 75° water 80° db, 67° wb for cooling, 70° db for heating. ‡Edwards shell and tube 23 ft long for MH31A, 27 ft for MH41A, and 49 ft for MH61A

Arctic Circle—International Metal Products Div., McGraw-Edison Co., 500 South 15th St., Phoenix, Ariz.																								
PHP25-1	23⅜	30	35	25,000†	25,800‡	Air	3#8	—	3.0	4	2,500	1/3	2.0	4	950	Comb.	Tecumseh	2	B21U18	3.5	—	T D	—	325
PHP37-1, 3	29½	32	53	36,300†	35,700‡	Air	7#	—	4.7	4	3,350	1/3	3.0	4	1,350	⅓	Tecumseh	3	PJE300	5.7/4.6	—	T D	—	445
PHP50-1, 3	29½	36	55	49,500†	47,000‡	Air	11#	—	4.6	6	4,200	1/3	3.75	4	1,600	⅓	Tecumseh	4	PFB400	7.9/7.1	—	T D	—	615
PHP63-1	32	45	60	63,000†	59,200‡	Air	17#	—	7.0	6	5,000	1/3	4.5	4	2,000	½	Tecumseh	5	PFB500	9.0	—	T D	—	715
PHP63-3	32	45	60	63,000†	59,000‡	Air	17#	—	7.0	6	5,000	1/3	4.5	4	2,000	½	Tecumseh	5	PFB500	7.9	—	T D	—	715
RHP37	29½	32	29	36,000†	35,700‡	Air	7#	—	4.7	4	3,800	1/3	3.0	4	1,350	⅓	Tecumseh	3	PJE300	5.7	—	T D	—	340
RHP50	29½	36	31	49,500†	47,000‡	Air	11#	—	4.6	6	4,500	1/3	3.75	4	1,600	⅓	Tecumseh	4	PFB400	7.1	—	T D	(2) 14x25	450
RHP63	32	45	34	63,000†	59,200‡	Air	17#	—	7.0	6	5,000	1/3	4.5	4	2,000	½	Tecumseh	5	PFB500	7.9	—	T D	(2) 20x25	540
RHP98	48	34½	53⅝	83,000†	85,800‡	Air	30#	—	9.2	6	8,960	3/4	7.5	4	3,000	¾	Copeland	7½	MR50-780	8.2	—	T D	(2) 14x25	775
RHP122	36	40¼	60¼	122,000†	112,000‡	Air	42#	—	14.0	6	11,000	1	9.0	4	4,000	1	Copeland	10	9R5-1000	10.8	—	T D	(4) 16x25	975

†Rated under ARI standard. ‡At 40°.

Auto-Temp—Tempromatic Corp., Deland, Fla.																								
*3AA	32¼	43¼	45	37,000†	41,000‡	Air	10	—	8.3	4	3,400	1/2	2.57	4	1,400	¼	Tecumseh	3	PJE300	4.3	75	T D	P 20x25x1	750
*5AA	32¼	43¼	45	62,000†	70,000‡	Air	16	—	10.3	4	4,800	1	4.08	4	2,000	½	Tecumseh	5	PFB500	6.5	105	T D	P 25x30x1	995
*7AA	48½	48	49¾	85,000†	98,000‡	Air	—	—	14.6	4	8,000	1	6.1	4	3,000	¾	Copeland	7½	MR50-780	9.5	145	T D	P (2) 25x25	—
*10AA	48½	48	49¾	117,500†	135,900‡	Air	—	—	20.9	4	10,000	2	8.0	4	4,000	1	Copeland	10	9R5-1000	13.0	180	T D	P (2) 25x35	—
15AA	57	75	44½	172,000	180,000‡	Air	—	—	29.2	4	15,000	1½	12.5	4	6,200	3	Copeland	20	—	25.0	—	T D	P (3) 16x25, (4) 16x20	—
20AA	93	101	55	230,000	242,000‡	Air	—	—	40.4	4	24,000	2	15.8	4	8,000	5	Copeland	20	—	27.0	—	T D	P (3) 20x25, (4) 20x30	—
25AA	93	101	55	287,000	301,400‡	Air	—	—	40.4	4	24,000	3	21.8	4	10,800	5	Copeland	30	—	33.1	—	T D	P (4) 20x30, (4) 20x25	—
30AA	93	117	55	344,000	366,500‡	Air	—	—	51.3	4	30,500	5	23.7	4	12,000	5	Copeland	30	—	49.0	—	T D	P (8) 25x20	—
40AA	93⅜	117	55	458,600	483,600‡	Air	—	—	65.8	5	40,000	5	35.4	4	16,000	7½	Copeland (2)	20	—	52.5	—	T D	‡‡	—
2WA	63¼	28¼	21¼	32,000†	41,000‡	Water	—	1.5	—	—	—	—	2.0	4	1,000	¼	Tecumseh	2	PJE300	3.5	—	—	P 20x25	—
3WA	63¼	28¼	21¼	44,900†	55,500‡	Water	—	1.5	—	—	—	—	2.57	4	1,400	⅓	Tecumseh	3	PJE300	3.9	75	—	P 20x25	—
4WA	72¼	30¼	26¼	58,600†	75,000‡	Water	—	1.5	—	—	—	—	3.27	4	1,600	⅓	Tecumseh	4	PFB400	5.0	99	—	P 25x30	—
5WA	72¼	30¼	26¼	73,300†	97,060‡	Water	—	1.5	—	—	—	—	4.08	4	2,000	½	Tecumseh	5	PFB500	6.5	105	—	P 25x30	—
8WA	72¼	52	26	95,100†	132,380‡	Water	—	1.5	—	—	—	—	6.4	4	3,200	¾	Copeland	7½	MR50-780	7.8	145	—	P (2) 20x25	—
10WA	72¼	54	27	126,000†	176,130‡	Water	—	1.5	—	—	—	—	8.0	4	4,000	1	Copeland	10	9R5-1000	10.7	180	—	P (2) 25x30	—
15WA	76	58	33	191,000†	238,000‡	Water	—	1.5	—	—	—	—	12.8	4	6,000	2	Copeland	20	—	16.0	—	—	P (4) 20x25	—
20WA	80	68	35	251,000†	313,000‡	Water	—	1.5	—	—	—	—	16.4	4	8,000	2	Copeland	30	—	19.5	—	—	P (4) 25x30	—
25WA	90	68	35	318,000†	380,000‡	Water	—	1.5	—	—	—	—	20.1	4	10,000	3	Copeland	30	—	20.9	—	—	P (4) 25x30	—
30WA	96	83	41	379,000†	453,000‡	Water	—	1.5	—	—	—	—	25.6	4	12,800	5	Copeland	30	—	29.9	—	—	P (6) 25x30	—
40WA	96	86	41	497,000†	609,000‡	Water	—	1.5	—	—	—	—	32.2	4	16,000	5	Copeland (3)	30	—	39.0	—	—	P (8) 25x30	—
50WA	126	86	55	635,000†	780,000‡	Water	—	1.5	—	—	—	—	34.6	6	20,000	7½	Copeland (2)	30	—	54.0	—	—	P (8) 25x30	—
2WW	40	28	28	32,500††	40,500**	Water	—	1.5	—	—	—	—	—	—	—	—	Tecumseh	2	PJE300	3.5	—	—	—	—
3WW	40	28	28	43,700††	62,000**	Water	—	1.5	—	—	—	—	—	—	—	—	Tecumseh	3	PJE300	3.6	—	—	—	—
5WW	40	30	30	73,000††	92,000**	Water	—	1.5	—	—	—	—	—	—	—	—	Tecumseh	5	PFB500	5.5	—	—	—	—
8WW	46	30	30	98,000††	122,000**	Water	—	1.5	—	—	—	—	—	—	—	—	Copeland	7½	MR50-780	7.5	—	—	—	—
10WW	48	30	30	122,000††	152,000**	Water	—	1.5	—	—	—	—	—	—	—	—	Copeland	10	9R5-1000	10.0	—	—	—	—
15WW	48	36	30	184,000††	230,000**	Water	—	1.5	—	—	—	—	—	—	—	—	Copeland	20	—	14.0	—	—	—	—
20WW	60	36	34	245,000††	305,000**	Water	—	1.5	—	—	—	—	—	—	—	—	Copeland	20	—	18.7	—	—	—	—
25WW	60	40	34	305,000††	380,000**	Water	—	1.5	—	—	—	—	—	—	—	—	Copeland	30	—	23.0	—	—	—	—
30WW	60	40	34	367,500††	460,000**	Water	—	1.5	—	—	—	—	—	—	—	—	Copeland	30	—	26.0	—	—	—	—
40WW	60	72	34	487,000††	601,000**	Water	—	1.5	—	—	—	—	—	—	—	—	Copeland (3)	20	—	35.0	—	—	—	—
50WW	60	80	34	610,000††	780,000**	Water	—	1.5	—	—	—	—	—	—	—	—	Copeland (2)	30	—	44.0	—	—	—	—
60WW	60	80	34	735,000††	920,000**	Water	—	1.5	—	—	—	—	—	—	—	—	Copeland (2)	30	—	55.0	—	—	—	—
80WW	60	84	34	974,000††	1,220,000**	Water	—	1.5	—	—	—	—	—	—	—	—	Copeland (2)	30, 20	—	70.0	—	—	—	—
90WW	60	120	34	1,101,000††	1,370,000**	Water	—	1.5	—	—	—	—	—	—	—	—	Copeland (3)	30	—	78.0	—	—	—	—

†Rated under ARI standard 240. ††80° db, 67° wb return air. ‡‡70° source water 55/50° chilled water, 145° outdoor air, 70° inside. §70° db return air, 70° water, ** 70° source water, heated water 110/130°. ‡‡(8) 16x20, (4) 20x30, (2) 16x25, 20x25.

Bard—Bard Mfg. Co., P. O. Box 430, Bryan, Ohio																								
*PA22H-A1	23	29⅞	30¼	20,000	20,000	Air	2#12½	—	4.0	3	1,600	1/3‡	1.9	3	750	½‡	Tecumseh	2	B21U18	3.0	55	T D	—	265
*PA30H-1	26	32	49¾	30,000	27,000	Air	5#3	—	4.9	4	2,350	1/3	2.8	3	1,100	¼	Tecumseh	3	PJG300	4.65	74	T D	—	415
*PA40H-4	26	32	49¾	38,000	38,000	Air	6#10	—	4.9	4	2,350	1/3	2.8	4	1,400	⅓	Tecumseh (2)	2	(3) B21U18	5.9	55 ea.	T D	—	490
*PA60H-1	37	42	57½	56,000	53,000	Air	10#7	—	9.0	4	3,400	1/3	3.75	4	1,800	½	Tecumseh	5	PFB500	8.2	127	T D	—	700
37ACH	38⅝	38⅛	31⅝	34,000	32,000	—	—	—	6.8	3	2,000	1/5	2.46	4	1,200	⅓	Tecumseh	3	PJE300	4.9	78	T D	—	340
60ACH	33¼	48⅜	31⅝	56,000	54,000	—	—	—	7.6	4	4,400	(2) 1/3	4.6	4	2,000	⅓	Tecumseh	5	PFB500	7.8	127	T D	—	502

‡Common fan.

Bonair—Peerless Products Co., 23rd & Sedgley Ave., Philadelphia 23, Pa.																								
PA22H-A1	23	30	30	20,000	20,000	Air	2#12.5	—	4.0	3	1,600	1/2	1.9	3	750	½	Tecumseh	2	B21U18	3.0	64.6	—	—	265
PA30H-1	26	32	50	30,000	27,000	Air	5#3	—	4.9	4	2,350	1/3	2.8	3	1,100	¼	Tecumseh	3	PJG300	4.65	85.1	—	—	415
PA40H-4	26	35	53	38,000	38,000	Air	6#10	—	4.9	4	2,350	1/3	2.8	4	1,400	⅓	Tecumseh (2)	2	B21U18	5.9	73.5	—	—	490
PA60H-1	37	42	57½	56,000	53,000	Air	10#7	—	9.0	4	3,400	1/3	3.75	4	1,800	½	Tecumseh	5	PFB50	8.2	146.3	—	—	700

Brown—A. Brown Products Corp., 1090 Springfield Rd., Union, N. J.																								
*PA22H	23	29⅞	30¼	20,000†	20,000	Air	2#12½	—	4.0	3	1,600	1/3‡	1.9	3	720	½‡	Tecumseh	2	B21U18	3.0	—	T D	—	265
*PA30H	26	32	49¾	30,000†	27,000	Air	5#3	—	4.9	4	2,350	1/3	2.8	3	1,200	¼	Tecumseh	3	PJG300	4.65	—	T D	—	415
*PA40H	26	32	49¾	38,000†	38,000	Air	6#10	—	4.9	4	2,350	1/3	2.8	4	1,400	⅓	Tecumseh	(2) 2	B21U18	5.9	—	T D	—	510
*PA60H	37	42	57½	56,000†	53,000	Air	11#12	—	9.0	4	3,400	1/3	3.75	4	1,800	½	Tecumseh	5	PFB500	8.2	—	T D	—	700

†Rated under ARI standard. ‡Same motor for inside and outside coil.

Burnham—Burnham Corp., Warm Air & Cooling Div., Belle Vernon, Pa.																								
*RC-3H	33⅝	38¼	31⅝	34,000	32,000	Air	—	—	6.8	3	2,000	1/5	2.46	4	1,200	⅓	Tecumseh	3	PJE300	4.2	78	T D	20x25	340
*RC-5H	33¼	48⅜	31⅝	56,000	54,000	Air	—	—	7.6	4	4,400	(2) 1/3	4.6	4	2,000	½	Tecumseh	5	PFB500	7.0	127	T D	(2) 16x22¼	502
HS-2H	23	29⅞	30¼	20,000	20,000	Air	2#12	—	4.0	3	1,600	1/2	1.9	3	750	—	Tecumseh	2	B21U18	3.0	55	T D	—	265
HS-3H	26	32	49¾	30,000	27,000	Air	5#3	—	4.9	4	2,350	1/3	2.8	3	1,100	¼	Tecumseh	3	PJG300	4.65	74	T D	—	415
HS-4H	26	32	49¾	38,000	38,000	Air	(2) 3#5	—	4.9	4	2,350	1/3	2.8	4	1,400	⅓	Tecumseh	(2) 2	B21U18	5.9	(2) 55	T D	—	490
HS-5H	37	42	57½	56,000	53,000	Air	10#7	—	9.0	4	3,400	1/3	3.75	4	1,800	½	Tecumseh	5	PFB500	8.2	127	T D	—	700

Carrier Heat Pump Weathermaker—Carrier Air Conditioning Co., Carrier Pkwy., Syracuse, N. Y.																								
*24C2	21⅛	30¼	37⅞	20,000†	23,000†	Air	3.0	—	3.6	3	1,350	1/10	2.05	3	800	¼	Tecumseh	2	B21T18	—	—	T/T	16x25x1	235
*24C4	24	35	47	36,000†	39,000†	Air	7.6	—	4.52	4	1,750	1/6	3.18	4	1,200	⅓	Carrier	3	6D24-C	—	—	T/T	(2) 14x20x1	490
63AA008(r)	50	60	102	89,000†	98,000†	Air	33.0‖	—	14.5	3	7,000	1½	7.75	4	3,000	1	Carrier	7½	6D73	—	—	T/T	‡	1700
*38EG004	—	—	—	37,000	38,000†	Air	—	—	4.52	4	1,750	1/6	—	—	—	—	Carrier	3	6D24-C	—	—	T/T	—	—
40AA004	45	28	33	—	—	—	—	—	—	—	—	—	3.60	3	800-1,500	⅓	—	—	—	—	—	—	(2) 16x20x1	133
64D8	20¼	40	23	49,000†	53,400†	Air	18.0‖	—	6.85	4	2,700	1/4	—	—	—	—	Carrier	4	6D47	—	—	T/T	—	480
—	29	40	28	—	—	—	—	—	—	—	—	—	4.43	3	1,600	⅓	—	—	—	—	—	—	(2) 20x20x2	155
64D8	44⅛	72	38¼	89,000†	98,000†	Air	35.5‖	—	14.53	3	7,000	1½	—	—	—	—	Carrier	7½	6D73	—	—	T/T	—	950
—	50⅝	48	25⅝	—	—	—	—	—	—	—	—	—	7.75

Heat Pumps

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities—Cooling (Btuh)	Capacities—Heating (Btuh)	Heat Source	Refrig. Charge (Lbs)	Water Usage (gpm/ton)	Outside Coil—Face Area (Sq Ft)	Rows Deep	Cfm	Blower Hp	Inside Coil—Face Area (Sq Ft)	Rows Deep	Cfm	Blower Hp	Compressor—Make	Hp	Comp. Mfrs. Model No.	Kw Input Total	Locked Rotor Amps	Defrost Control Type	Air Filter Dimensions	Net Weight
Clima-Pump—Round Oak, Inc. of Indiana, Dowagiac, Mich.																								
CPA-584-1A, 3A	31½	34¼	34¼	54,500†	55,000	Air	7#	—	7.5	3	2,800	1/5	2.24	3	1,200	½	Tecumseh	3	PJE300	—	78/75	T D	—	—
CPA-584-1A, 3A	31½	37¼	37¼	57,200†	54,300	Air	9#	—	11.3	3	4,800	1/2	4.52	3	2,000	½	Tecumseh	5	PFB500	—	127/109	T D	—	—
SCHP-22	33	29½	30¼	22,000	20,000	Air	—	—	—	—	1,800	1/2‡	—	—	800	½‡	Tecumseh	2	R21U18	—	55	T D	—	275
SCHP-30	36	33	49¾	30,000	27,000	Air	—	—	—	—	2,600	1/3	—	—	1,000	—	Tecumseh	3½	PJG300	—	74	T D	—	420
†Rated under ASRE standard. ‡Double end shaft.																								
Comfort-Aire—Heat Controller, Inc., 1900 Wellworth Ave., Jackson, Mich.																								
*PA22H-1	33	29½	30¼	20,000†	20,000	Air	2.9	—	4.0	3	1,800	1/2	1.9	3	750	½	Tecumseh	2	R21U18	3.0	64.6	P D	—	265
*PA30H-1	36	32	49¾	30,000†	27,000	Air	5.2	—	4.9	4	2,250	1/3	2.8	3	1,100	¾	Tecumseh	3	PJG300	4.65	85.1	P D	—	415
*PA40H-4	36	32	49¾	38,000†	38,000	Air	6.6	—	4.9	4	2,250	1/3	2.8	4	1,400	½	Tecumseh	(3) 2	R21U18	5.9	73.5	P D	—	430
*PA60H-1(3)	37	42	57½	56,000†	53,000	Air	10.5	—	9.0	4	3,400	1/3	3.75	4	1,800	½	Tecumseh	5	PFB500	8.2	146.3	P D	—	780
*HCA-351H	39¾	33½	31¾	34,000†	32,000	Air	9.0	—	6.75	3	2,000	1/5	2.46	4	1,300	¾	Tecumseh	3	PJE300	4.71	83.8	P D	20x25x1	340
*HCA-611(3)H	33¼	48¾	31¾	56,000†	54,000	Air	13.7	—	7.6	4	4,400	(2) 1/3	4.6	4	2,000	¾	Tecumseh	5	PFB500	8.2	141.2	P D	(2) 16x22¾x1	503
HCA-913(4)H	73¾	101¾	40	90,000†	92,000	Air	—	—	21.5	3	10,000	(2) 1	7.3	4	2,800	1	Copeland	7½	MR50-701	11.2	145.0	Timer	(3) 16x20	1475
HCA-1203(4)H	73¾	101¾	40	110,000†	110,000	Air	—	—	21.5	4	9,600	(2) 1	8.9	4	4,000	1½	Copeland	10	9R8-1000	12.2	180.0	Timer	(3) 20x20	1545
†Rated under ARI standard.																								
Continental—International Metal Products Div., McGraw-Edison Co., 500 South 15th St., Phoenix, Ariz.																								
PHP2-1	23¾	30	35	25,000†	25,800‡	Air	3.2#	—	3.0	4	2,500	1/3	2.0	4	950	Comb.	Tecumseh	2	R21U18	3.5	—	T D	—	225
PHP3-1, 3	29½	33	53	36,000†	35,700‡	Air	7#	—	4.7	4	3,800	1/3	3.0	4	1,350	¼	Tecumseh	3	PJE300	5.7/4.6	—	T D	—	465
PHP4-1, 3	29½	36	55	48,500†	47,000‡	Air	11#	—	4.6	6	4,200	1/3	3.75	4	1,600	½	Tecumseh	4	PFB400	7.9/7.1	—	T D	—	615
PHP5-1	32	45	60	63,000†	59,200‡	Air	17#	—	7.0	6	5,600	1/3	4.5	4	2,000	½	Tecumseh	5	PFB500	9.0	—	T D	—	715
PHP5-3	32	45	60	63,000†	58,000‡	Air	17#	—	7.0	6	5,600	1/3	4.5	4	2,000	½	Tecumseh	5	PFB500	7.9	—	T D	—	715
RHP3	29½	33	29	36,000†	35,700‡	Air	7#	—	4.7	4	3,800	1/3	3.0	4	1,350	¼	Tecumseh	3	PJE300	5.7	—	T D	20x25	340
RHP4	29½	36	31	48,500†	47,000‡	Air	11#	—	4.6	6	4,200	1/3	3.75	4	1,600	½	Tecumseh	4	PFB400	7.1	—	T D	(2) 14x25	450
RHP5	32	45	34	63,000†	59,200‡	Air	17#	—	7.0	6	5,600	1/3	4.5	4	2,000	½	Tecumseh	5	PFB500	7.9	—	T D	(2) 20x25	580
RHP7½	48	34½	33¾	83,000†	85,800‡	Air	20#	—	9.3	6	8,960	3/4	7.5	4	3,000	¾	Copeland	7½	MR50-700	8.2	—	T D	(3) 14x25	775
RHP10	36	49¾	66¼	122,000†	112,000‡	Air	42#	—	14.0	6	11,000	1	9.0	4	4,000	1	Copeland	10	9R8-1000	10.8	—	T D	(4) 16x25	975
†Rated under ARI standard. ‡At 40°.																								
Coolerator—Albion Div., McGraw-Edison Co., 704 N. Clark St., Albion, Mich.																								
*H2RC21	26¾	31¼	28¼	24,000†	22,000	Air	Holding	—	4.0	4	2,000	1/6	2.4	4	800	¼	Tecumseh	2	R21U18	3.13	52.4	T D	—	—
*H2RA21	30¾	31¼	28¼	36,000†	32,000	Air	Holding	—	4.0	4	2,000	1/6	2.4	4	1,200	⅓	Tecumseh	3	PJE300	4.65	80.4	T D	—	—
*H2RA21	17¾	26	24	20,000†	21,000	Air	3.2#	—	2.2	5	—	1/32‡	1.6	4	685	⅛‡	Tecumseh	2	R21U18	3.15	65.5	T D	—	—
*H3RA21	23¾	30½	52¼	32,000†	31,000	Air	5.2#10	—	4.06	3	—	3/4‡	2.5	3	1,200	⅜‡	Tecumseh	3	PJE300	4.51	86.1	T D	—	—
†Rated under ARI standard. ‡Drives indoor and outdoor blower.																								
Cool Heat—Drying Systems Co., 1800 Foster Ave., Chicago 40, Ill.																								
10-3-22	66	64	78	122,500‡	120,000‡	Air	30	—	9.0	4	5,000	3	9.0	4	3,000	1	Copeland	10	9R8-1000	—	—	—	20x25x2	2000
15-3-22	66	64	78	175,000‡	180,000‡	Air	35	—	9.0	6	7,000	3	9.0	4	4,500	3	Copeland	15	(3) MRG-750	—	—	—	20x25x2	2000
20-3-22	66	64	90	245,000‡	200,000‡	Air	50	—	11.25	6	9,000	3	11.25	6	6,000	3	Copeland	20	(2) 9R8-1000	—	—	—	20x25x3	4000
‡Cooling rating conditions: Return air @ evaporator 70° F. †Heating rating conditions: Includes electric heaters.																								
Day & Night—Day & Night Mfg. Co., 855 Anaheim-Puente Rd., La Puente, Calif.																								
24 DNH-1	21½	30¼	25	21,000†	23,000†	Air	5.0	—	2.67	3	1,200	1/3	2.07	3	800	¼	Tecumseh	2	R21U18	3.7	55	T D	—	340
24 DNH-1, 3	25¼	33½	29¼	33,000†	34,000†	Air	8.0	—	4.82	4	1,800	1/6	3.20	3	1,200	¼	Tecumseh	3	PJE300	4.8	78/75	T D	—	388
†Rated under ARI standard.																								
Delco 365 Conditionair—Delco Appliance Div., General Motors Corp., P. O. Box 230, Rochester 1, N. Y.																								
*CH20E	32	29½	30¼	20,000†	20,000‡	Air	2#13½	—	4.0	3	1,600	1/2	1.9	3	750	½‡	Tecumseh	2	R21U18	2.94	64.3	T D	—	265
*CH30E	36	32	49¾	30,000†	27,000‡	Air	5#3	—	4.9	4	2,250	1/3	2.8	3	1,100	¾	Tecumseh	3	PJG300	3.85	84.7	T D	—	415
*CH35E	36	32	49¾	36,000†	36,000‡	Air	6#10	—	4.9	4	2,250	1/3	2.8	4	1,400	½	Tecumseh	(2) 3	R21U18	5.85	122.3	T D	—	490
*CH35E, E3	37	42	57½	36,000†	53,200‡	Air	11#13	—	9.0	4	3,400	1/3	3.75	4	1,800	½	Tecumseh	5	PFB500	7.9	146.23	T D	—	780
RCH341E	33¾‡	38½	31¾	34,100†	32,000‡	Air	9#†	—	6.77	3	2,000	1/5	2.46	4	1,100	½	Tecumseh	3	PJE300	4.46	95.4	—	16x20	340
RC561E, 562E	33¼‡	48¾	31¾	56,000†	53,900‡	Air	13#11†	—	7.64	4	4,400	(2) 1/3	3.82	5	1,600	½	Tecumseh	5	PFB500	7.6	148.8	—	20x25	502
†Cooling rating conditions: 80° db/67° wb—95° outside air. ‡Heating rating conditions: 70° inside 45° outside. §Dimensions for outdoor section. ¶With 25 ft line. ‖Common with condenser fan.																								
Floatingair—Friedrich Refrigerators, Inc., 1117 East Commerce St., San Antonio, Texas																								
*DHU-502, 501	29	30¾	38¾	55,000†	65,000†	Air	22‡	—	8.34	4	3,900	1/3	—	—	—	—	Tecumseh	5	PFB500	6.85	127/109	T D	—	535
CHE-501	24	31¼	63¾	—	—	—	—	—	—	—	—	—	4.4	4	1800-2,100	⅓	—	—	—	—	—	—	P 30x35x1	305
*RHE-500	23½	26¾	25¾	—	—	—	—	—	—	—	—	—	4.4	4	1800-2,100	⅓	—	—	—	—	—	—	—	180
*DHU-301	21¾	28¾	35¼	35,000†	34,000†	Air	11‡	—	5.8	4	2,900	1/3	—	—	—	—	Tecumseh	3	PJE300	3.4	78	T D	—	300
RHF-301	23¾	34¾	22¼	—	—	—	—	—	—	—	—	—	2.4	4	1100-1,300	⅓	—	—	—	—	—	—	P 23x17¾x1	125
†Rated under ARI standard. ‡Base.																								
Forston, Lincoln, Circle-Vec (CVH)—The Forston Co., 2117-19 Judiway St., Houston 18, Texas																								
*PKR-2	31	26	25¼	28,500†	27,100	Air	3.2#	—	3.87	4	2,800	1/4	1.98	4	800	⅓	BW/Tec.	2	H490TA‡	2.50	55/—	—	—	350
*PKR-3	35½	32½	47½	31,000†	36,000†	Air	4.2#12	—	4.0	3	2,800	1/4	2.25	3	1,200	⅓	Tecumseh	3	PJE300	3.30	78/75‡	—	—	475
*PKR-4	33¼	37	68¼	49,000†	54,700	Air	8.2#	—	6.3	3	3,500	1/2	4.34	4	1,600	½	Tecumseh	4	PFB402	4.9	110/78‡	—	—	550
*PKR-5	33¼	37	68¼	62,600†	68,000	Air	10#	—	6.3	4	3,500	1/2	4.34	4	1,600	½	Tecumseh	5	PFB502	6.9	74/80‡	—	—	900
PEH-3 CMH	35½	22½	47½	25,500†	28,000	Air	3.2#12	—	4.0	3	2,800	1/4	2.25	2	800	¼	BW/Tec.	2	T490TA‡	2.50	55/—	—	—	375
PEH-3 CMH	35½	32½	47½	36,000†	40,000	Air	4.2#12	—	4.0	4	2,800	1/4	2.25	4	1,200	⅓	Tecumseh	3	PJG300	3.80	78/75‡	—	—	460
PEH-4 CMH	31¼	41	68¼	53,200†	58,100	Air	10#	—	6.2	3	3,500	1/3	4.32	4	1,600	½	Tecumseh	4	PFB402	4.90	110/78‡	—	—	900
5-PKGHP CMH	31¼	41	68¼	62,600†	68,000	Air	10#	—	6.2	4	3,500	1/3	4.32	4	2,000	½	Tecumseh	5	PFB502	6.9	127/109‡	—	—	960
5-PKG CMH	41¼	77½	42¼	63,800†	75,000	Air	11#	—	9.0	3	5,400	1/2	6.30	4	2,200	½	Tecumseh	5	PFB502	6.90	127/109‡	—	—	990
7½-PKG CMH	41¼	77½	42¼	83,700†	99,000	Air	14#	—	9.0	4	6,100	3/4	6.30	4	3,280	¾	Copeland	7½	MRG-751	7.96	125/67.5**	—	—	1130
10-PKG CMH	55	99	49¼	116,800†	130,000	Air	22#	—	16.0	3	8,800	1	7.5	4	4,300	1	Copeland	10	9R8-1000	10.14	190/93**	—	—	1400
15-PKG CMH	51	127	54¼	185,000†	213,000	Air	36#	—	19.0	4	12,500	(3) 3/4	11.68	4	6,600	1	Copeland	20	4R48-3006	18.65	250/125**	—	—	1800
20-PKG CMH	60	128	54¼	223,000†	270,000	Air	45#	—	23.39	4	12,800	(2) 3/4	17.7	4	8,000	1½	Copeland	30	6R48-3006	22.01	250/125**	—	—	2400
*RH-200B	25½	29¾	35½	23,500†	28,000	Air	—	—	4.0	3	2,800	1/4	2.25	3	800	¼	BW/Tec.	—	H490TA‡	2.45	55/—	—	—	350
200R-3-BLSHP	25½	29¾	35½	36,400†	39,400	Air	—	—	4.0	4	2,800	1/4	2.25	4	800	¼	BW/Tec.	—	JB300	2.40	56/43‡	—	—	375
*RH-300B	25½	29¾	35½	31,000†	36,000	Air	—	—	4.0	3	2,800	1/4	2.25	4	1,200	⅓	Tecumseh	—	PJG300	3.30	78/75‡	—	—	400
300R-3-BLSHP	25½	29½	35½	37,100†	41,800	Air	—	—	4.0	4	2,800	1/4	2.25	4	1,200	⅓	Tecumseh	—	PJE300	3.83	78/75‡	—	—	475
*RH-400B	34½	34	37	49,000†	54,700	Air	—	—	6.2	3	3,500	1/3	4.34	4	1,600	½	Tecumseh	—	PFB402	4.9	110/78‡	—	—	550
400R-4-BLSHP	34½	34	37	53,200†	58,100	Air	—	—	6.2	4	3,500	1/3	4.34	4	1,600	½	Tecumseh	—	PFB402	4.90	110/78‡	—	—	575
*RH-500B	34½	34	37	62,600†	68,000	Air	—	—	6.2	4	3,500	1/3	4.34	4	2,000	½	Tecumseh	—	PFB502	6.9	127/109‡	—	—	600
500R-5-BLSHP	41¼	41½	40	63,800†	75,000	Air	—	—	9.0	3	5,400	1/2	5.30	4	2,280	½	Tecumseh	—	PFB502	6.60	127/109‡	—	—	625
750R-7½-BLSHP	41¼	41½	40	83,700†	90,000	Air	—	—	9.0	4	6,100	3/4	6.30	4	3,300	¾	Copeland	—	MRG-751	7.96	125/67.5**	—	—	725
1000R-10-BLSHP	55	53¼	49¼	116,800†	130,000	Air	—	—	16.0	3	8,800	1	7.5	4	4,280	1	Copeland	—	9R8-1000	10.14	190/93**	—	—	825
1500R-15-BLSHP	42	81	54½	185,000†	212,000	Air	—	—	19.0	4	12,300	(2) 3/4	11.68	4	6,000	1	Copeland	—	4R48-3006	18.65	250/125**	—	—	1495
2000R-20-BLSHP	53	82	54½	222,000†	270,000	Air	—	—	23.39	4	13,800	(2) 3/4	14.2	4	8,000	1½	Copeland	—	4R48-3006	22.01	250/125**	—	—	1950
3000R-30-BLSHP	60	144	51	332,000†	393,000	Air	—	—	41.66	4	17,600	(2) 1	22.1	4	12,000	(2) 1	Copeland	—	6R48-3006	34.42	292/196**	—	—	2600
300-CVH	30	53	30	35,345†	39,690	Air‡	8#	3	4.0	4	2,800	1/4	‡	—	—	—	Tecumseh	—	PJE300	3.85	78/75‡	—	—	300
400-CVH	30	53	30	50,540†	54,180	Air‡	12#	3	6.3	4	3,500	1/3	‡	—	—	—	Tecumseh	—	PFB402	4.91	110/78‡	—	—	1100
500-CVH	43	65	44	60,610†	69,300	Air‡	15#	3	9.0	3	5,400	1/3	‡	—	—	—	Tecumseh	—	PFB502	6.90	127/109‡	—	—	1300
750-CVH	43	54	44	79,515†	91,980	Air‡	20#	3	9.0	4	6,100	3/4	‡	—	—	—	Copeland	—	MRG-751	7.97	125/67**	—	—	1700
1000-CVH	53¼	72	42	110,940†	120,750	Air‡	35#	3	16.0	3	8,800	3/4	‡	—	—	—	Copeland	—	9R8-1000	10.16	190/93**	—	—	1850
1500-CVH	42	106	46	175,750†	197,400	Air‡	47#	3	19.0	4	12,500	(2) 3/4	‡	—	—	—	Copeland	—	4R48-3006	18.80	250/125**	—	—	2044
2000-CVH	53	106	46	211,000†	257,000	Air‡	54#	3	23.39	4	13,800	(2) 3/4	‡	—	—	—	Copeland	—	4R48-3006	22.13	250/125**	—	—	2345
3000-CVH	60	125	51	332,000†	356,000	Air‡	80#	3	41.66	4	17,600	(2) 1	‡	—	—	—	Copeland	—	6R48-3006	34.44	292/196**	—	—	3030
†Cooling rating conditions are 95° ambient, 80° db, 67° wb. ‡CVH models are air-to-water type. §Circle Vec units use individual room convector blower/evap. units which can vary in size from 200 cfm up. ‖Or Tecumseh's R21U18. ¶230/220. **230/240.																								
Gaffers & Sattler—Utility Appliance Corp., 8111 W. Beverly Blvd., Los Angeles 48, Calif.																								
2THP	34½	36	45¾	36,000†	39,000†	Air	8#1	—	5.33	4	2,100	1/4	4.89	4	1,400‡	⅛	Tecumseh	2	—	4.6	78	P D	—	—
†ARI standard, unit only—no strip heating. ‡At .10 sp.																								
General Electric—General Electric Co., Central Air Conditioner, Troup Hwy., Tyler, Texas																								
*WTC24F	31½	32	44	22,000†	24,000†	Air	6#8	—	4.06	3	1,800	1/4	1.91	3	900	¼	G-E	2	—	3.5	69.9/—	A S	—	315
*WTC30F	35¼	32	44	28,500†	31,000†	Air	7#4	—	4.06	3	2,400	1/3	2.63	3	1,125	¼	G-E	3	—	4.57	94.8/68.8‡	A S	—	345
*WTC36F	35¼	32	44	34,000†	39,000†	Air	7#4	—	4.78	3	2,800	1/3	3.63	3	1,350	¾	G-E	4	—	5.6	112.3/98.3‡	A S	—	355
WTA36F	28¼	32	28	28,800†	31,000†	Air	—	—	4.06	3	2,000	1/3	—	—	—	—	G-E	3	—	4.57	87/68‡	A S	—	280
*WTE30BH	18	28½	26¼	—	—	—	—	—	—	—	—	—	2.5	3	1,125	¼	—	—	—	—	—	—	16x25x1	110
*WTE36BC	55	32¼	26	—	—	—	—	—	—	—	—	—	2.5	3	1,125	¼	—	—	—	—	—	—	P 20x30x1	170
*WTA36F	25¼	32	28	34,000†	39,000†	Air	—	—	4.78	3	2,400	1/2	—	—	—	—	G-E	4	—	5.6	104/91‡	A S	—	265
*WTE36BH	18	28½	26½	—	—	—	—	—	—	—	—	—	2.66	3	1,350	¼	—	—	—	—	—	—	16x25x1	115
*WTE36BC	55	32¼	26	—	—	—	—	—	—	—	—	—	2.85	3	1,350	⅓	—	—	—	—	—	—	P 20x30x1	180
*WTA48B	27¼	70¾	27¼	46,000†	48,000†	Air	—	—	7.0	4	3,200	1/2	—	—	—	—	G-E	5	—	5.95	135.5/109.5‡	A S	—	715
*WTE48AC	55	28½	28¾	—	—	—	—	—	—	—	—	—	2.9	3	1,800	⅓	—	—	—	—	—	—	P (3) 12x25x1	246
*WTE48BH	33¾	43¼	35	—	—	—	—	—	—	—	—	—	3.9	3	1,800	½	—	—	—	—	—	—	P (3) 20x20x1	307
WTA60B	27¼	70¾	27¼	57,000†	61,000†	Air	—	—	8.3	4	4,000	3/4	—	—	—	—	G-E	6	—	8.2	—/133.5‡	A S	—	755
WTE60AC	55	28½	28¾	—	—	—	—	—	—	—	—	—	4.9	3	3,250	¾	—	—	—	—	—	—	P (3) 12x25x1	257
WTE60BH	33¾	43¼	35	—	—	—	—	—	—	—	—	—	4.9	3	3,250	¾	—	—	—	—	—	—	P (3) 20x20x1	339
WTA36A	31	70	27½	36,000†	38,000†	Air	—	—	16.7	3	7,000	1	—	—	—	—	G-E	10	—	—	—/195‡	A S	—	750
WTE36AH	26	57¾	41¼	—	—	—	—	—	—	—	—	—	8.0	3	3,500	¾	—	—	—	—	—	—	Accessory	316
WTA120A	51	70	27½	120,000†	127,000†	Air	—	—	16.7	4	8,000	2	—	—	—	—	G-E	12	—	—	—/269‡	A S	—	900
WTE120AH	26	57¾	41¼	—	—	—	—	—	—	—	—	—	8.0	4	4,500	1½	—	—	—	—	—	—	Accessory	339
†Rated under ARI standard. ‡Single-phase/three-phase.																								
Heatwave—Southwest Mfg. Co., P. O. Box 151, Aurora, Mo.																								
*PEK-321	23	45	25	24,000	26,000	Air	—	—	5.5	3	1,800	1/5	2.9	3	800	¼	Tecumseh	2	R21U18	2.5	78	T D	18x25x1	300
*PEK-331	23	45	25	36,000	38,000	Air	—	—	5.5	3	2,400	1/5	2.9	3	1,200	⅓	Tecumseh	3	PJE300	3.7	92	T D	18x25x1	400
*PEK-431	29	45	33	47,000	52,000	Air	—	—	10.5	3	3,600	1/3	4.0	3	1,600	½	Copeland	4	4U-36	4.9	126	T D	(2) 18x20x1	560
*PEK-531	29	45	33	60,000	65,000	Air	—	—	10.5	3	3,600	1/3	4.0	3	2,000	⅝	Copeland	5	4U-51	6.3	127	T D	(3) 18x20x1	680
*PAQ-21	21	45	38	—	26,000	Air	2	—	2.8	3	2,000	1/3	2.0	3	800	¼	Tecumseh	2	R21U18	3.0	78	T D	—	300
*PAQ-31	31	45	38	—	39,000	Air	3	—	2.8	4	3,000	1/3	2.0	4	1,100	⅓	Tecumseh	3	JE300	4.0	92	T D	—	475
Heil—Heil-Quaker Corp., 647 Thompson Lane, Nashville 4, Tenn.																								
*B30C-1H	33	29¾	30¼	30,000	30,000	Air	2#13	—	4.0	3	1,800	1/2‡	1.9	3	720	½‡	Tecumseh	1½	R21U18	3.0	55	T D	—	265
*B36C-1H	36	32	49¾	36,000	27,000	Air	5#3	—	4.9	4	2,250	1/3	2.8	3	1,200	¼	Tecumseh	3	PJG300	4.65	74	T D	—	415
*A36C-1H	36	32	49¾	36,000	36,000	Air	6#10	—	4.9	4	2,250	1/3	2.8	4	1,400	½	Tecumseh	(3) 1½	R21U18	5.9	(2) 55	T D	—	490
*A56C-1H	37	42	57½	56,000	53,000	Air	11#13	—	9.0	4	3,400	1/3	3.75	4	1,800	½	Tecumseh	5	PFB500	8.2	127	T D	—	780
*A36CUBA-1H	33¾	38½	31¾	34,000	32,000	Air	9#	—	6.7	3	2,000	1/5	—	—	—	—	Tecumseh	3	PJE300	—	78	T D	—	340
A36EBBA-1†‡	23	38½	39¾	34,000	32,000	—	—	—	—	—	—	—	2.46	4	1,100	⅓	—	—	—	—	—	—	—	—
*A56CUBA-1H	33¼	48¾	31¾	56,000	54,000	Air	13#11	—	7.6	4	4,400	1/3	—	—	—	—	Tecumseh	5	PFB500	—	127	T D	—	502
A56EBBA-1†‡	35	34¼	33	56,000	54,000	—	—	—	—	—	—	—	3.83	5	1,600	½	—	—	—	—	—	—	—	—
†Blower-evaporator section. ‡Common.																								
Holly—Holly General Div. of Siegler Corp., 675 So. Arroyo Pkwy., Pasadena, Calif.																								
*HP3-25	34	33½	33	24,000†	25,000‡	Air	4#6	—	3.75	3	1,800	1/6	2.0	4	800	¼	Bendix-W.	2	CH490TA-2	2.6	48	T/T	—	285
*HP3-30	34	33½	38	28,000†	28,000‡	Air	5#9	—	3.75	3	2,000	1/4	2.0	4	1,000	¼	Bendix-W.	2½	YH700TA-2	3.0	75	T/T	—	355
*HP3-36	35½	40	44½	36,000†	38,000‡	Air	6#9	—	5.08	3	2,400	1/4	3.04	3	1,200	⅓	Tecumseh	3	PJE300	4.0	78	T/T	—	480
*HP3-45	35½	40	44½	43,000†	43,000‡	Air	7#6	—	5.40	4	3,200	1/3	3.04	4	1,600	½	Tecumseh	4	CL40	5.2	125	T/T	—	520
*HP3-60	39¾	48¾	52	60,000†	62,000‡	Air	10#8	—	7.0	4	4,000	1/3	4.0	4	2,000	½	Tecumseh	5	PFB500	6.5	127	T/T	—	630
†Rated under ARI standard. ‡At

Heat Pumps

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities Cooling (Btuh)	Heating (Btuh)	Heat Source	Refrig. Charge (Lbs)	Water Usage (gpm/ton)	Outside Coil Face Area (Sq Ft)	Rows Deep	Cfm	Blower Hp	Inside Coil Face Area (Sq Ft)	Rows Deep	Cfm	Blower Hp	Compressor Make	Hp	Comp. Mfrs. Model No.	Kw Input Total	Locked Rotor Amps	Defrost Control Type	Air Filter Dimensions	Net Weight
Marvair—Muncie Gear Works, Inc., P. O. Box 433, Cordele, Ga.																								
20HP-363	25¼	28	26	24,000	25,000	Air	†	—	3.75	3	2,200	1/4	3.50	3	800	¼	Bendix-W.	3	CH490TA-2	2.8	48	T D	20x25x1	375
30HP-363	25¼	28	26	34,500	37,000	Air	†	—	3.75	4	3,000	1/4	3.50	3	1,200	¼	Bendix-W.	3	YH830TA-2	4.1	80	T D	20x25x1	400
40HP-363	25½	54½	31½	48,000	50,000	Air	†	—	7.50	3	4,400	(2) 1/4	4.43	3	1,600	½	Tecumseh	4	PFB408	6.6	110	T D	16x30x1, 20x30x1	500
60HP-363	25½	54½	31½	60,000	70,000	Air	†	—	7.50	4	4,000	(2) 1/4	4.43	4	2,000	½	Tecumseh	5	PFB503	6.9	125	T D	16x30x1, 20x30x1	500
300HP	28	42	47	36,000	42,000	Air	†	—	6.50	3	2,600	1/3	3.86	4	1,200	¾	Tecumseh	3	PJE300	4.5	78	T D	20x25x1	660
500HP	28	42	47	60,000	80,000	Air	†	—	8.66	4	4,000	3/4	4.43	4	2,000	½	Tecumseh	5	PFB500	7.3	125	T D	16x20x1, 20x30x1	830
208CHP	25½	90¼	43	24,000	25,000	Air	4.4	—	2.75	3	2,000	1/4	2.0	4	800	¼	Bendix-W.	2	CH490TA-2	2.8	48	T D	20x25x1	340
308CHP	24½	34½	43	36,000	37,000	Air	6.6	—	4.10	4	3,400	1/4	3.0	4	1,200	¼	Bendix-W.	3	YH830TA-2	4.1	80	T D	20x25x1	370
†Split system.																								
Mathes—Mathes Co., Div. of Glen Alden Corp., Marble Falls, Texas																								
*32HAR-HP-1L	23	47	24	30,500†	30,500†	Air	—	—	2.9	4	2,200	1/3	2.9	4	1,140	¼	Tecumseh	3.2	PJG300	4.15	74.0	—	—	—
*36HAR-HP-1, 3L	23	47	24	34,200†	34,300†	Air	—	—	5.4	4	2,200	1/3	3.9	3	1,280	½	Tecumseh	3.6	PJE300	4.66	78.5/75	—	—	—
*48HAR-HP-1, 3L	32	61	27	45,600†	45,600†	Air	—	—	10.9	2	3,200	1/3	5.4	3	1,710	½	Tecumseh	4.3	PFB400	6.05	110/78	—	—	—
*62HAR-HP-1, 3L	32	61	27	57,000†	57,000†	Air	—	—	10.9	3	4,000	1/3	5.4	4	2,140	½	Tecumseh	5.4	PFB500	7.90	127/105	—	—	—
*90HAR-HP-3, 4L	45	78	27	83,500†	83,500†	Air	—	—	19.6	2	7,650	3/4	8.2	3	3,115	1	Copeland	8.7	MRG-750	11.04	130/67	—	—	—
120HAR-HP-3, 4L	45	78	27	112,000†	112,000†	Air	—	—	19.6	3	7,650	3/4	10.9	3	4,200	1½	Copeland	13.0	9R8-1000	14.87	180/89	—	—	—
180HAR-HP-3, 4L	45	78	33	170,000†	170,000†	Air	—	—	19.6	5	9,500	2	16.8	3	6,375	(2) 1	Copeland	18.0	4R48-3006	22.5	250/125	—	—	—
*24HAH-HP-1L	19½	28	29½	23,000†	23,000†	Air	—	—	2.0	4	2,000	1/3	2.0	4	800	¼	Tecumseh	2.5	B21U18	3.10	55.0	—	—	245
*32HAH-HP-1L	21½	33½	35	28,600†	28,600†	Air	—	—	3.9	4	3,000	1/2	2.5	4	1,160	½	Tecumseh	3.2	PJG300	4.15	74.0	—	—	315
*38HAH-HP-1, 3L	21½	39½	37½	34,200†	34,300†	Air	—	—	4.7	4	2,200	1/3	2.9	4	1,240	½	Tecumseh	3.9	PJE300	4.95	78.5/75	—	—	405
*42HAH-HP-1, 3L	29½	44½	45	40,000†	40,000†	Air	—	—	7.6	3	3,000	1/3	4.7	3	1,800	(2) ½	Tecumseh	4.4	CL35	5.89	95/70	—	—	445
*62HAH-HP-1, 3L	29½	44½	45	55,400†	55,400†	Air	—	—	7.6	4	4,000	1/3	4.7	4	2,000	(2) ½	Tecumseh	6.2	PFB580	8.40	127/105	—	—	610
†Rated under ARI standard. Indoor section of HAR-HP split available as follows: 32 through 180 horizontal or vertical discharge coil-blower; 36 through 62 up flow or down flow coil-blower; 36 through 120 ceiling suspended, free discharge coil-blower; 62 through 180 free standing, free discharge coil-blower.																								
McMillan—McMillan Heat Pumps, Inc., P. O. Box 5897, 1501 Miami Rd., Jacksonville 7, Fla.																								
*30-1A	67	36	23	27,200†	47,400‡	Water	10	2–3	—	—	—	—	4.8	4	1,200	¼	Copeland	3	8R39-302	3.0	70	—	16x22½, 20x22½x1	320
*40-1A	67	43	23	49,000†	62,000‡	Water	14	2–3	—	—	—	—	5.8	4	1,600	⅓	Copeland	4	NR40-400	4.0	131	—	(3) 20x22½x1	1100
*50-1A	74	43	23	60,800†	78,700‡	Water	16	2–3	—	—	—	—	8.6	4	2,000	½	Copeland	5	NR46-500	4.8	125	—	(4) 16x20x1	1230
*75-1A	74	55	23	94,700†	117,800‡	Water	22	2–3	—	—	—	—	10.7	4	3,000	¾	Copeland	7½	MR50-760	7.4	145	—	(4) 16x25x1	1900
100-1A	82	58	33	121,600†	158,100‡	Water	36	2–3	—	—	—	—	14.6	4	4,000	1	Copeland	10	9R8-1000	9.6	180	—	2 25x25x1, 2 20x25x1	2040
150-1A	82	86	33	191,000†	229,500‡	Water	44	2–3	—	—	—	—	23.3	4	8,000	1½	Copeland	20	4RA1-2008	18.5	280	—	‖	3050
250-1A	100	106	40	303,000†	364,700‡	Water	82	2–3	—	—	—	—	35.0	4	10,000	3	Copeland	30	6R48-3008	28.5	392	—	**	6000
100-1A	82	58	33	121,600†	158,100‡	Water	36	2–3	—	—	—	—	14.6	4	4,000	1	Copeland (2)	5	NR46-500	9.6	125‡	—	(8) 16x30x1	2040
150-1A	82	86	33	189,400†	231,000‡	Water	44	2–3	—	—	—	—	23.3	4	6,000	1½	Copeland	(3) 7½	MR50-760	14.8	145‡	—	(8) 16x25x1	3050
200-1A	82	106	33	242,800†	316,100‡	Water	62	2–3	—	—	—	—	29.2	4	8,000	2	Copeland	(2) 10	9R8-1000	19.4	180‡	—	4 25x25x1, 4 20x25x1	4400
300-1A	91	86	64½	382,000†	459,000‡	Water	120	2–3	—	—	—	—	46.0	4	12,000	3	Copeland	(3) 20	4RA1-2008	37.0	250‡	—	8 30x25x1, 8 25x25x1	8000
400-1A	119	106½	70½	480,000†	570,000‡	Water	142	2–3	—	—	—	—	58.4	4	16,000	(2) 2	Copeland	20/20	†	47.0	250/392	—	8 30x25x1, 8 25x25x1	10000
500-1A	119	106½	80½	606,000†	732,400‡	Water	164	2–3	—	—	—	—	70.0	4	20,000	(2) 3	Copeland	(2) 30	6R48-3008	57.0	392‡	—	††	12000
†Cooling rating conditions: ASRE—air enter 80° db-67°wb with condenser water enter 75°-leave at 95°. ‡Heating rating conditions: Air enter 70° with water enter 75°-leave at 59°. §RA1-2008 and 6R48-3008. ‖Each. ‖(4) 20x25, (4) 20x22½x1, (2) 16x25, (2) 16x23¼x1. **(4) 20x25, (4) 20x22½x1, (4) 16x25, (4) 16x22½x1. ††Same as 250-1A except 8 of each size.																								
Meyer, Weir-Meyer—The Meyer Furnace Co., 1300 S.W. Washington St., Peoria, Ill.																								
*37ACH	38¾	38½	31⅞	34,000	32,000	Air	9#	—	6.77	3	2,000	1/3	—	—	—	—	Tecumseh	3	PJE300	4.7	78	T D	—	340
*37UBH	21¼	25	25⅝	—	—	—	—	—	—	—	—	—	2.48	4	1,100	⅓	—	—	—	—	—	—	—	110
*60ACH	32⅝	45⅝	31⅞	56,000	54,000	Air	13#11	—	7.64	4	4,400	(2) 1/3	—	—	—	—	Tecumseh	5	PFB500	8.1	127	T D	—	465
*60UBH	36¾	25	30	—	—	—	—	—	—	—	—	—	3.82	5	1,600	⅓	—	—	—	—	—	—	—	140
*60EBH	23¼	43¼	41	—	—	—	—	—	—	—	—	—	3.82	5	1,600	⅓	—	—	—	—	—	—	—	370
*PA32H-1	22	29⅛	30¼	30,000	30,000	Air	2#12½	—	4.0	3	1,600	1/2‡	1.9	3	750	¼‡	Tecumseh	2	B21U18	3.0	55	T D	—	265
*PA30H-1	26	32	49⅝	30,000	27,000	Air	5#3	—	4.9	4	2,250	1/3	2.8	3	1,100	¼	Tecumseh	3	PJG300	4.65	74	T D	—	415
*PA40H-1	26	32	49⅝	38,000	38,000	Air	6#10	—	4.9	4	2,250	1/3	2.8	4	1,400	⅓	Tecumseh	(3) 3	(2) B21U18	5.9	55 ea.	T D	—	480
*PA60H-1	37	42	57⅛	56,000	53,000	Air	11#13	—	9.0	4	3,400	1/3	3.75	4	1,800	½	Tecumseh	5	PFB500	8.3	127	T D	—	815
‡Common fan.																								
Miami Air—Air Conditioning & Refrigeration Div., Crane Co., Miami, Okla.																								
HP21-31	37	27‡	—	24,000	19,000	Air	—	—	6.8	1	2,040	¼	1.88	3	800	¼	Tecumseh	2	B21U18	2.65	—	—	—	280
HP31-33	44	27‡	—	36,000	27,000	Air	—	—	10.47	1	3,140	¼	2.82	3	1,200	¼	Tecumseh	3	PJE300	4.00	—	—	—	335
HP41-43	50	34‡	—	48,000	41,000	Air	—	—	16.24	1	4,050	¼	3.75	3	1,600	¼	Tecumseh	4	PFB400	5.2	—	—	—	400
HP51-53	56	34‡	—	60,000	47,000	Air	—	—	20.08	1	6,000	⅓	3.75	3	2,000	½	Tecumseh	5	PFB500	5.2	—	—	—	499
‡Diameter.																								
Mueller Climatrol—Mueller Climatrol, Div. of Worthington Corp., 2005 W. Oklahoma Ave., Milwaukee 1, Wis.																								
315-31	33	34⅞	39¾	32,000‡	30,000†	Air	4.8	—	4.4	3	2,500	¾	2.2	4	1,075‖	¾	Tecumseh	3	PJG300	4.80†	—	—	14x30x1	480
315-1-41	35⅞	37⅛	42¾	42,000‡	39,500†	Air	7.5	—	5.4	4	2,785	⅓	2.83	4	1,375‖	⅓	Tecumseh	(2) 2	B21U18	5.90†	—	—	14x30x1	580
318-3	30½	34½	29¾	34,000‡	37,500†	Air	14.5	—	5.7	3	2,700	⅓	—	—	1,200‖	—	Tecumseh	3	PJE300	3.98†	—	—	—	390
317-300	23¾	41	28¼	34,000‡	37,500†	Air	—	—	—	—	—	—	3.2	3	1,360‖	¾	—	—	—	—	—	—	(2) 16x20x1	345
318-5	29¾	34½	48¼	56,000‡	60,500†	Air	18.0	—	5.2	3	4,650	¼	—	—	2,000‖	—	Tecumseh	5	PFB500	7.30†	—	—	—	710
317-500	29¼	41⅝	38	56,000‡	60,500†	Air	—	—	—	—	—	—	4.5	4	2,225‖	⅓	—	—	—	—	—	—	(3) 20x20x1	275
‡Cooling rating conditions: 95° F. d.b. and 75° F. w.b. outside air, 80° F. d.b. and 67° F. w.b. inside air. †Heating rating conditions: 45° F. d.b. and 43° F. w.b. outside air, 70° F. d.b. inside air. ‖C.f.m. at .3 in. external static pressure. §C.f.m. at 80° F. d.b. and 50% r.h. through indoor coil units. †Cooling kw. input.																								
Payne—The Payne Co., 855 Anaheim-Puente Rd., La Puente, Calif.																								
24HP-1	21½	30¼	35	21,000†	22,000†	Air	5.0	—	3.67	3	1,200	1/3	3.07	3	800	¼	Tecumseh	2	B21U18	2.7	55	T D	—	340
36HP-1, 3	25¼	33½	39¼	33,000†	34,000†	Air	8.0	—	4.62	4	1,800	1/6	3.20	3	1,200	¼	Tecumseh	3	PJE300	4.8	78/75	T D	—	380
†Rated under ARI standard.																								
Perfection—Perfection Div., Hupp Corp., 1135 Ivanhoe Rd., Cleveland 10, Ohio																								
PAS21AH	24	29¼	49¼	24,000	25,200	Air	3#2	—	3.36	3	2,000	1/3	1.75	4	800	†	Bendix-W.	2	CH490TA-2	—	58.3	T D‖	—	410
PAS30HA	24	29¼	49¼	36,000	37,800	Air	4#8	—	3.80	4	2,400	1/3	2.33	5	1,200	0.4	Bendix-W.	3	YCH830TA-2	—	91.05	T D‖	—	454
3PAS30HA	24	29¼	49¼	36,000	37,800	Air	4#8	—	3.80	4	2,400	1/3	2.33	5	1,200	0.4	Bendix-W.	3	YCH830TA-2	—	75.55	T D‖	—	450
PAS40H	30½	36¼	64½	48,000	48,000	Air	3#24	—	6.22	3	3,550	1/2	3.61	5	1,600	½	Bendix-W.	(2) 2	CH490TA-2	—	74.8	T D‖	—	830
PAS60H	30½	36¼	64½	56,000	58,000	Air	8#2	—	6.22	4	3,700	3/4	3.61	5	1,700	¾	Copeland	5	NR46-502C	—	136	T D‖	—	935
2PAS60H	30½	36¼	64½	56,000	58,000	Air	8#2	—	6.22	4	3,700	3/4	3.61	5	1,700	¾	Copeland	5	NR46-501	—	130	T D‖	—	930
PAR20H	14¼	30½	23	22,000	25,000	Air	4#3	—	2.36	4	1,200	1/6	1.74	3	700	¼	Bendix-W.	2	CH490TA-2	—	57.1	T D‖	—	—
PAR30HS	46	23	29¾	37,000	34,800	Air	†	—	3.80	4	2,400	1/3	2.33	5	1,200	¼	Bendix-W.	3	YCH830TA-2	—	101.5	T D‖	—	534
2PARJ30HS	46	23	29¾	37,000	34,800	Air	†	—	3.80	4	2,400	1/3	2.33	5	1,200	¼	Bendix-W.	3	YCH830TA-2	—	98	T D‖	—	530
PAR60HS	46	23	36	59,000	61,000	Air	†	—	6.22	4	3,700	3/4	6.22	5	2,000	¾	Copeland	5	NR46-502C	—	136	T D‖	—	965
2PAR60HS	46	23	36	59,000	61,000	Air	†	—	6.22	4	3,700	3/4	6.22	5	2,000	¾	Copeland	5	NR46-501	—	130	T D‖	—	960
§Each. ‡Depends on length of interconnecting tubing. †Common with condenser fan. ¶All northern heat pumps with suffix N, not listed here, take time-initiated, temperature-terminated defrost control.																								
Polar-Prince—The Coleman Co., Inc., 250 N. St. Francis, Wichita 1, Kan.																								
*6308	32⅞	46	34	36,000†	38,000‡	Air	3#8	—	6.78	3	3,700	1/2	3.44	4	1,240	⅛	Tecumseh	3	PJE301	4.76	78	AS/TD	20x25x1	661
†Rated under ARI standard. ‡Heating rating conditions: 45°/43° outside; 70° inside.																								
Rangaire—Cobell Industries, Inc., 601 South Wilhite, Cleburne, Texas																								
*A-573-T1-HP	26	35½	48¾	35,000†	33,000‡	Air	—	—	4.5	4	2,940	1/2	3.0	3	1,200	⅛	Tecumseh	3	PJE301	4.5	78	T D	—	310
†Cooling rating conditions: 80° db., 67° wb inside; 95° db outside. ‡Heating rating conditions: 70° db. inside; 45° db, 43.9° wb outside.																								
Reversamatic—Revco, Inc., Deerfield, Mich.																								
RP-2	24	34	46	24,000†	24,000	Air	3#8	—	3.12	3	1,600	1/2‡	2.08	4	800	⅛‡	Tecumseh	2	B21U18	3.5	55	T D	—	310
RP-3	24	44	56	36,000†	36,000	Air	6#	—	3.75	4	2,200	1/3	2.68	4	1,200	⅛	Tecumseh	3	PJE300	4.15	74	T D	—	410
RP-4	37	51	60	38,000†	38,000	Air	6#10	—	4.9	4	2,400	1/3	2.8	4	1,600	⅛	Tecumseh	(2) 2	—	5.9	110	T D	—	580
RP-5	37	51	60	56,000†	52,000	Air	11#13	—	9.0	4	3,500	1/3	3.75	4	2,000	⅛	Tecumseh	5	PFB500	8.2	125	T D	—	780
OS-36	29	36	26	37,000†	34,000	Air	6#5	—	5.5	3	2,200	1/5	—	—	—	—	Tecumseh	3	PJE300	4.15	74	T D	—	375
IS-36	21	30	49	37,000†	34,000	Air	—	—	—	—	—	—	2.68	4	1,200	⅛	—	—	—	—	—	—	20x25x1	—
OS-60	33	51	34	49,000†	48,000	Air	11#	—	9.4	3	3,800	(2) 1/5	—	—	—	—	Tecumseh	4	PFB408	5.9	110	T D	—	640
IS-60	29	30	65	49,000†	46,000	Air	—	—	—	—	—	—	4.0	4	1,600	⅛	—	—	—	—	—	—	(2) 16x25x1	—
OS-60	33	51	34	61,000†	59,000	Air	11#	—	9.4	3	3,800	(2) 1/5	—	—	—	—	Tecumseh	5	PFB503	7.3	125	T D	—	640
IS-60	29	30	65	61,000†	59,000	Air	—	—	—	—	—	—	4.0	4	2,000	⅛	—	—	—	—	—	—	(2) 16x25x1	—
†Rated under ARI standard 240. ‡Common fan.																								
Rollairette—Rollaire Co., 321 North Bel Air Dr., Plantation, Ft. Lauderdale, Fla.																								
#1	17⅛	22⅞	22⅞	12,000	13,500	Water	3#	3.0	—	—	—	—	1.0	4	400	1/15	Bendix-W.	1	CH211BA-1	10	44	—	9⅝x15½x¼	135
Thermacooler—Thermador Electrical Mfg. Co., 5119 District Blvd., Los Angeles 22, Calif.																								
*TCS-312, 332	21	34⅜	24⅜	36,700†	36,300‡	Air	8	—	4.86	4	2,880	1/3	2.92	4	1180-1,400	⅛	Tecumseh	3.6	PJE301	appr. 4.5	78/75	T/T	P 16x30x1	528
*TCS-512	35¼	50⅛	30¼	64,000†	62,000‡	Air	10	—	7.65	4	4,350	(2) 1/3	4.6	4	1840-2,300	⅛	Tecumseh	6.5	PFB568	appr. 7.4	157	T/T	P 16x35x7, 16x30x1	675
*TCS-532	35¼	50⅛	30¼	64,000†	62,000‡	Air	10	—	7.65	4	4,350	(2) 1/3	4.6	4	1840-2,300	⅛	Tecumseh	6.5	PFB568	appr. 7.4	165	T/T	P 16x35x1, 16x30x1	675
TCS-534	35¼	50⅛	30¼	64,000†	62,000‡	Air	10	—	7.65	4	4,350	(2) 1/3	4.6	4	1840-2,300	⅛	Tecumseh	6.5	PFB568	appr. 7.4	83.5	T/T	P 16x35x1, 16x30x1	675
†Rated under ARI standard. ‡At 45°. Note: These units are suitable for both residential and commercial applications. Units are made up of an outdoor section (A) and an indoor section B; these two sections can be joined together to make a package unit or installed remote.																								
Thomas A. Edison—Albion Div., McGraw-Edison Co., 704 N. Clark St., Albion, Mich.																								
*TR2RC21	26⅝	31¼	28⅛	24,000†	22,000	Air	Holding	—	4.0	4	2,000	1/6	2.4	4	800	¼	Tecumseh	2	B21U18	3.13	—	T D	—	—
*TRIRA21	30⅝	31¼	28⅛	36,000†	32,000	Air	Holding	—	4.0	4	2,000	1/6	2.4	4	1,200	⅓	Tecumseh	3	PJE300	4.65	—	T D	—	—
*THIRA21	17⅝	38	38	20,000†	21,000	Air	3#8	—	2.2	3	—	1/32	1.5	4	625	⅛‡	Tecumseh	2	B21U18	3.15	—	T D	—	—
*THIRA21	23⅞	30½	43¼	32,000†	31,000	Air	5#10	—	4.06	3	—	9/41	2.5	3	1,200	⅓‡	Tecumseh	3	PJE300	4.51	—	T D	—	—
†Rated under ARI standard. ‡Drives indoor and outdoor blower.																								
Typhoon—Typhoon Heat Pump Div., Hupp Corp., P. O. Box 1123, Tampa 1, Fla.																								
*35H	66	34	36	31,000†	39,700‡	Water	5#3	1.5	—	—	—	—	2.75	4	1,000	¼	Tecumseh	2	JB300	2.95	43.6‖	—	20x20	320
*55HU	66	34	36	45,300†	57,700‡	Water	7#3	1.5	—	—	—	—	3.65	4	1,400	⅓	Tecumseh	3	JE300	3.95	68‖	—	25x20	552
*70H	66	46	36	62,000†	77,400‡	Water	11#	1.5	—	—	—	—	5.5	4	2,000	½	Tecumseh	(2) 3	JE300	5.7	43.6‖	—	(2) 25x20	1080
*80HU	76	28	30	72,300†	88,600‡	Water	12#	1.5	—	—	—	—	5.75	4	2,400	¾	Tecumseh	5	FB500	6.6	90‖	—	25x30	750
*110H	66	46	36	93,400†	115,400	Water	15#	1.5	—	—	—	—	7.8	4	3,000	¾	Tecumseh	(2) 3	JE300	7.9	64‖	—	(2) 25x20	1104
150H	85	55	33	125,000†	158,000	Water	18#	1.5	—	—	—	—	7.5	4	4,000	1	Copeland	10	9R8-1000	9.7	180‖	—	P (3) 20x30	1300
*160H	76	55	30	144,400†	177,200	Water	24#	1.5	—	—	—	—	11.5	4	4,800	1	Tecumseh	(3) 5	FB500	13.2	90‖	—	25x30	1350
225H	85	55	33	194,000†	229,000	Water	15#	1.5	—	—	—	—	11.0	4	8,000	1½	Copeland	20	4R48-3006	18.8	250‖	—	P (2) 20x30	1400
300H	92	62	42	237,000†	308,000	Water	17#	1.5	—	—	—	—	15.0	4	8,000	2	Copeland	20	4R48-3006	18.1	250‖	—	P (4) 20x30	2000
300-2H	92	62	42	348,000†	310,000	Water	25#	1.5	—	—	—	—	15.0	4	8,000	2	Copeland	(2) 10	9R8-1000	19.4	180‖	—	P (4) 20x30	2300
375-2H	92	62	42	316,000†	393,000	Water	27#	1.5	—	—	—	—	18.5	4	10,000	3	Copeland	20/10	†	27.0	250‖	—	P (4) 20x30	2350
450-2H	92	62	42	384,000†	474,000	Water	29#	1.5	—	—	—	—	22.0	4	12,000	3	Copeland	(2) 20	4R48-3006	36.6	250‖	—	P (4) 20x30	2450
600-2H	96	84	42	503,000†	629,000	Water	42#	1.5	—	—	—	—	31.0	4	16,000	7½	Copeland	(2) 30/10	†	49.4	250‖	—	P (6) 20x30	3000
675-2H	96	84	42	576,000†	711,000	Water	44#	1.5	—	—	—	—	33.0	4	18,000	7½	Copeland	(3) 20	4R48-3006	54.8	250‖	—	P (6) 20x30	3100
*32AH	61	21	22	29,000†	36,000	Water	3#4	1.5	—	—	—	—	2.6	3	800	¼	Tecumseh	2	JE300	2.8	43.6‖	—	P 16x16	460
*52AHU	61	21	22	44,000†	56,000	Water	3#8	1.5	—	—	—	—	3.6	5	1,400	⅓	Tecumseh	3	JE300	3.8	68‖	—	P 16x16	500
*77AHU	75	25	26	70,000†	88,000	Water	5#8	1.5	—	—	—	—	5.9	5	2,200	½	Tecumseh	5	FB500	6.7	90‖	—	P 22x22	720
*97AH	75	25	26	89,000†	114,000	Water	8#	1.5	—	—	—	—	6.1	5	3,000	¾	Copeland	7½	MRG-751P	7.6	135‖	—	P 22x26	900
WW25H	33	24	24	29,800†	37,200	Water	3#3	1.5	—	—	—	—	—	—	—	—	Tecumseh	2	JB300	2.55	43.6‖	—	—	370
WW55H	33	24	24	43,400†	54,250	Water	3#8	1.5	—	—	—	—	—	—	—	—	Tecumseh	3	JE300	3.95	68‖	—	—	450
WW80H	43	28	28	69,300†	86,600	Water	5#8	1.5	—	—	—	—	—	—	—	—	Tecumseh	5	FB500	5.7	90‖	—	—	680
WW120H	43	28	28	92,500†	115,500	Water	7#3	1.5	—	—	—	—	—	—	—	—	Copeland	7½	MRG-751P	7.0	135‖	—	—	1050
WW150H	43	28	28	120,000†	150,000	Water	9#3	1.5	—	—	—	—	—	—	—	—	Copeland	10	9R8-1000	9.9	180‖	—	—	1200
WW225H	43	28	28	194,000†	248,000	Water	11#3	1.5	—	—	—	—	—	—	—	—	Copeland	20	4R48-

Heat Pumps

Model No.	Cabinet Dimensions (In.) Height	Width	Depth	Capacities—Cooling (Btuh)	Capacities—Heating (Btuh)	Heat Source	Refrig. Charge (Lbs)	Water Usage (gpm/ton)	Outside Coil: Face Area (Sq Ft)	Rows Deep	Cfm	Blower Hp	Inside Coil: Face Area (Sq Ft)	Rows Deep	Cfm	Blower Hp	Compressor: Make	Hp	Comp. Mfrs. Model No.	Kw Input Total	Locked Rotor Amps	Defrost Control Type	Air Filter Dimensions	Net Weight
Typhoon—Typhoon Air Conditioning Div., Hupp Corp., 505 Carroll St., Brooklyn 15, N. Y.																								
TAS-21AH	24	29¼	49¼	24,000†	28,800‡	...	...	...	2.36	3	2,000	1/3	1.75	4	800	⅛	Bendix-W.	2	...	3.24	58.3	...	...	330
TAS-30H	24	29¼	49¼	36,000†	44,800‡	Air	...	...	3.89	4	3,700	1/4	2.33	5	1,200	.40	Bendix-W.	3	...	5.55	91.1	...	...	434
TAS-31AH	24	29¼	49¼	39,000†	44,800‡	Air	...	...	3.89	4	3,700	1/4	2.33	5	1,200	⅛	Bendix-W.	(3)1¾	...	5.40	62.8	...	...	534
TAS-60H	30½	36¼	64½	58,000†	71,500‡	Air	...	...	6.22	4	3,700	3/4	3.61	5	2,000	¾	Bendix-W.	5	...	8.88	138.0	...	...	845
3TAS-60H	30½	36¼	64½	58,000†	71,500‡	Air	...	...	6.22	4	3,700	3/4	3.61	5	2,000	¾	Copeland	5	...	8.68	180.0	...	...	845
(3)TAR-30HS	23	23	29¶	37,000†	38,800‡	Air	...	...	3.89	4	2,400	1/4	2.33	5	1,200	⅛	Bendix-W.	3	...	5.55	91.1	...	...	...
(3)TAR-60HS	23	23	39¶	59,000†	61,000‡	Air	...	...	6.22	4	3,700	3/4	3.61	5	2,000	¾	Copeland	5	NR46	8.68	180.0	...	...	...

†Cooling rating conditions: Air entering evap. at 80° db & 67° wb, outdoor temp.: 95° at standard cfm. ‡Heating rating conditions: 70° return air temperature, 60° outdoor temp. ¶Model consists of three sections, two with these dimensions, the third measuring 24x29x29 on Model (3)TAR-30HS and 30x36x38 on Model (3)TAR-60HS.

Thermatic—National Thermatic Corp., 939 West 35th, P. O. Box 10699, Houston, 18, Texas																								
*T-2-24-PHP	20¾	25¾	39	23,300†	24,380‡	Air	4#8	...	2.24	4	1,540	1/12	1.55	4	800	⅛	Tecumseh	2	...	...	53.6	T D	...	315
*T-2-36-PHP	25½	32¾	47	35,000†	38,000‡	Air	5#8	...	4.0	4	4,760	1/4	2.25	4	1,200	⅛	Tecumseh	3	...	...	64.6	T D	...	450
*T-5-60-PHP	31¾	37½	69	59,000†	66,780‡	Air	8#8	...	6.3	3	5,000	1/3	4.34	4	2,000	⅛	Tecumseh	5	...	...	85.5	T D	...	960
*T-2-24-HP	25¼	29½	35¼	24,000†	24,300‡	Air	...	...	4.0	3	4,760	1/3	2.10	4	800	⅛	Tecumseh	2	...	...	43.6	T D	...	220¶
*T-2-36-HP	25½	29½	35¼	36,000†	38,902‡	Air	...	...	4.0	4	4,760	1/3	2.10	6	1,200	⅛	Tecumseh	3	...	...	68	T D	...	560¶
*T-5-60-HP	41¼	41¼	36¼	60,000†	68,780‡	Air	...	...	9.0	3	8,250	1/3	3.39	3	2,000	⅛	Tecumseh	5	...	...	90	T D	...	635¶
T-8-90-HP	41¼	41¼	36½	90,000†	90,100‡	Air	...	...	9.0	4	9,450	1/2	5.30	4	3,000	¾	Copeland	7½	...	...	126	T D	...	700¶
T-10-120-HP	53¼	53	36½	120,000†	121,688‡	Air	...	...	16.0	3	14,000	3/4	7.5	4	4,000	¾	Copeland	10	...	...	180	T D	...	850¶
T-15-180-HP	38½	84	40	174,000†	176,432‡	Air	...	...	19.0	4	18,880	1	11.68	4	6,000	1	Brunner	15	...	...	196	T D	...	1400¶

†At 90° ambient. ‡At 50° ambient. ¶Condenser weight.

Vikimatic—Vikimatic, Inc., 1747 Chester Ave., Cleveland 14, Ohio																								
PA-22H-A1	22	30	30¾	20,000†	20,000‡	Air	2#12½	...	4.0	3	1,600	1/3	1.9	3	750	⅓	Tecumseh	2	B21U18	3.0	55	T D	...	265
PA-30H-1	26	32	49¾	30,000†	27,000‡	Air	5#3	...	4.9	4	2,250	1/3	2.8	3	1,100	¼	Tecumseh	3	PJG300	4.65	74	T D	...	415
PA-40H-4	26	32	49¾	38,000†	38,000‡	Air	6#10	...	4.9	4	2,250	1/3	2.8	4	1,400	⅓	Tecumseh	3	(2) B21U18	5.9	55 ea.	T D	...	480
PA-60H-1	37	42	57¼	56,000†	53,000‡	Air	10#7	...	9.0	4	3,400	1/3	3.75	4	1,800	½	Tecumseh	5	PFB500	8.2	127	T D	...	760
27ACH	38¼	39¼	31¾	34,000†	32,000‡	Air	1#	...	6.8	3	2,000	1/5	...	...	...	...	Tecumseh	5	PJE300	4.9	78	T D	...	340
37BCH	22	26½	29¼	34,000†	32,000‡	Air	...	...	...	...	...	...	2.46	4	1,200	⅓	...	...	...	...	...	...	...	...
60ACH	32¼	48¾	33	56,000†	54,000‡	Air	1#	...	7.6	4	4,400	(2) 1/3	...	...	...	...	Tecumseh	5	PFB500	7.8	127	T D	...	502
60BCH	25	34½	33	56,000†	54,000‡	Air	...	...	...	...	...	...	4.6	4	2,000	⅓	...	...	...	...	...	...	...	...

†Cooling rating conditions: At 95° outside ambient. ‡Heating rating conditions: At 45° outside ambient.

Weatherking—Weatherking of Florida, 1604 Sligh Blvd., Orlando, Fla.																								
*WKA30	25	25	25	27,300†	44,000‡	Air	11#	...	5.4	4	3,200	1/3	3.0	5	1,400	⅓	Tecumseh	3	PJE301	4.8	75	T D	20x25x1	730
*WKA40	25	30	25	53,300†	60,000‡	Air	16#	...	7.1	4	4,200	3/4	4.0	5	1,750	¼	Tecumseh	4	PFB408	6.5	78	T D	(2) 14x25x1	905
*WKA50	56	51	26	66,600†	73,000‡	Air	19#	...	9.0	4	5,400	(2) 1/3	4.8	5	2,400	⅓	Tecumseh	5	PFB508	7.8	105	T D	(2) 16x25x1	1295
*WKA75	56	51	26	89,000†	96,000‡	Air	30#	...	14.2	4	7,800	(3) 1/2	7.0	5	3,500	¾	Copeland	7½	MR50-780	10.8	135	T D	(3) 16x25x1	1570
WKA100	60	61	26	111,500†	121,000‡	Air	36#	...	18.0	4	8,800	(2) 3/4	9.5	5	4,000	1	Copeland	10	9R5-1000	13.4	180	T D	(3) 20x25x1	1875
WKA150	68	76	30	139,500†	212,000‡	Air	50#	...	27.8	4	12,800	(2) 1	13.9	5	7,000	1½	Copeland	20	4R48-2006	25.2	250	T D	(6) 16x25x1	2640
*WK300	53	26	26	43,400†	54,200‡	Water	7#	1.5	...	...	...	...	3.0	5	1,400	⅓	Tecumseh	3	PJE301	4.3	75	...	20x30x1	490
*WK400	56	41	29	57,100†	72,400‡	Water	8#	1.5	...	...	...	...	4.0	5	1,750	⅓	Tecumseh	4	PFB408	5.8	78	...	25x24x1	680
*WK500	56	41	29	73,100†	92,100‡	Water	9#	1.5	...	...	...	...	4.8	5	2,400	⅓	Tecumseh	5	PFB508	7.3	105	...	(2) 16x25x1	740
WK750	77	51	28	102,500†	127,000‡	Water	14#	1.5	...	...	...	...	7.0	5	3,500	¾	Copeland	7½	MR50-780	10.2	135	...	(3) 16x25x1	1190
WK1000	81	61	36	130,500†	162,300‡	Water	18#	1.5	...	...	...	...	9.5	5	4,000	1	Copeland	10	9R5-1000	13.6	180	...	(3) 20x25x1	1450
WK1500	91	76	30	220,000†	286,000‡	Water	28#	1.5	...	...	...	...	13.9	5	7,000	1½	Copeland	20	4R48-2006	25.4	250	...	(6) 16x25x1	2630

Dimensions for indoor section. †Cooling rating conditions: 80° db, 67° wb entering air, 95° ambient on air units; 75° water on water units. ‡Heating rating conditions: 72° entering air, 45° ambient on air units; 75° water on water units.

Welbilt—Welbilt Air Conditioning & Heating Corp., R-524 Lakewood Rd., Farmingdale, N. J.																								
*WHP-30	66	35¼	25½	28,000†	46,000‡	Water	11#	1.5-3†‡	...	...	...	...	2.7	5	1,200	⅛	Tecumseh	3	PJE300	3.5	...	None	P 14¾x25¾x1	784
*WHP-50	72	44¾	26¾	61,000†	80,000‡	Water	13#	1.5-3†‡	...	...	...	...	4.4	5	2,000	⅛	Tecumseh	5	PFB500	6.3	...	None	P 18½x34¾x1	925
*WHP-75	71	51	30¼	92,000†	120,000‡	Water	16#	1.5-3†‡	...	...	...	...	6.7	5	3,000	(2) ⅛	Copeland	7½	MRG-750	6.5	...	None	(2) P 19½x25¼x1	1167
WHP-100	75	57	30¼	121,000†	160,000‡	Water	26#	1.5-3†‡	...	...	...	...	9.0	5	4,000	(2) ⅛	Tecumseh	(2) 5	PFB500	12.6	...	None	(2) P 29¼x22½x1	1581
WHP-150	75	70	31¾	183,000†	230,000‡	Water	32#	1.5-3†‡	...	...	...	...	13.5	5	6,000	(3) ¾	Copeland	(3) 7½	MRG-750	13.1	...	None	¶	3100

†Cooling rating conditions: 75° F. water, 1½ gpm/ton. ‡Heating rating conditions: 70° F. water, 3 gpm/ton. ¶(2) P 29¼x22½x1, (1) 14¾x29¼x1.

Westernaire—Western Supply Co., Hutchinson, Kansas																								
HP21-A	15¾	30¼	38¾	22,500	...	Air	...	...	2.3	4	2,000	1/3‡	1.8	4	820	⅓‡	Bendix-W.	2	CH490TA-2	1.8	52.4	...	...	249
HP31, 32A	26¾	30¼	48¾	34,000	...	Air	...	...	4.0	4	2,500	1/3	3.0	4	1,200	⅓	Tecumseh	3	PJE300	3.4	78/75	...	...	399
HP41-A	26¾	30¼	48¾	46,000	...	Air	...	...	4.5	4	3,000	1/3	3.5	4	1,600	⅓	Copeland	4	4U26-401	3.5	110	...	...	445
HP51, 53A	25¾	36½	61	59,000	...	Air	...	...	8.3	4	3,500	1/3	4.4	4	2,000	½	Tecumseh	5	PFB500	6.5	127/105	...	...	800
HP73-A	44	43¼	78	90,000	...	Air	...	...	13.0	4	4,500	3/4	5.6	4	3,000	¾	...	...	...	...	...	...	...	1180
HP301, 3CPW	57½	25¾	21¾	34,760	...	Water	...	2.6	...	...	...	...	2.0	4	800	¼	Tecumseh	2	JE300	1.8	56	...	20x30x1	329
HP301, 3CPW	57½	25¾	21¾	38,650	...	Water	...	2.6	...	...	...	...	2.9	4	1,200	⅓	Tecumseh	3	PJE300	3.4	78/75	...	20x30x1	360
HP501, 3CPW	68¾	35	34½	65,800	...	Water	...	3.6	...	...	...	...	4.6	4	2,000	½	Tecumseh	5	PFB500	6.5	127/105	...	(2) 16x25x1	615

‡Double shaft.

Western & Atlas—Global Air Conditioning Corp., 2045 Evans Ave., San Francisco 24, Calif.																								
*21HP-1	23	29½	30¼	21,300†	23,900‡	Air	3#14	...	4.0	3	1,500	1/3	2.0	3	720	...	Tecumseh	2	B21U18	3.25	55.0¶	...	...	265
*31HP-1	24	33	46½	32,500†	35,000‡	Air	4#13	...	4.6	3	2,400	1/2	2.8	3	1,300	...	Tecumseh	3	JE300	4.65	107.8¶	...	...	435
*41HP	24	33	53½	43,400†	45,400‡	Air	6#4	...	4.6	4	2,900	1/2	2.8	4	1,675	⅓	Tecumseh	(2) 2	B21U18	7.0	138.5¶	...	...	585
*41HP-1	26	33	50	43,400†	43,800‡	Air	...	...	...	...	...	1/3	...	...	1,350	⅓	...	...	...	5.9	...	...	...	480
*51HP	37	42	57½	64,000†	56,000‡	Air	11#13	...	9.0	4	3,400	1/3	3.75	4	2,000	⅓	Tecumseh	5	PFB500	8.9	127.0¶	...	...	760

†Rated under ARI standard. ‡Heating rating conditions: without auxiliary heating 55° outside temperature and 70° inside temperature. ¶Locked rotor amps include blower motors.

Westinghouse—Westinghouse Electric Corp., Air Conditioning Div., Staunton, Va.																								
PHP-2A	21¼	30	40	24,000†	26,150	Air	...	...	2.64	4	...	⅓	1.98	4	800	¼	...	2	...	3.3	...	...	...	299
PHP-3A	25¼	34	43¼	35,000†	38,650	Air	...	...	3.58	5	...	1/3	2.67	4	1,340	⅓	...	3	...	4.9	...	...	...	429
PHP-4B	31½	40¼	64¼	48,000†	55,275	Air	...	...	5.00	5	...	(2) 3/4	3.67	4	1,710	⅓	...	(2) 3	...	6.7	...	...	...	667
PHP-5B	31½	40¼	70¼	61,000†	66,500	Air	...	...	6.25	5	...	(2) 1/2	4.67	4	2,080	⅝	...	(2) 2½	...	9.3	...	...	...	839
RHP-32B	40¾	36	29	35,000†	65,000	Air	...	...	6.8	3	2,800	1/2	...	...	...	...	...	3	...	5.3	...	...	...	575
RHP-32A	51½	34	34	...	...	...	...	...	...	...	...	...	3.10	4	1,200	⅓	...	...	...	...	...	...	...	300
RHP-52A	39¾	51½	30	54,000†	55,000	Air	...	...	10.4	3	4,200	3/4	...	...	...	...	...	5	...	8.3	...	...	...	715
RHP-52A	51½	42	34	...	...	...	...	...	...	...	...	...	4.50	4	2,000	¾	...	...	...	...	...	...	...	370
RHP-72A	58¾	51½	39¾	72,500†	107,000	Air	...	...	13.4	3	4,900	1	...	...	...	...	...	7½	...	11.43	...	...	...	1000
RHP-72A	41	41¾	28	...	...	...	...	...	...	...	...	...	5.60	4	2,800	¾	...	...	...	...	...	...	...	600
HB18A	72¾	25¾	13¾	18,000	17,000	Air	...	...	2.92	3	1,420	1/8	1.82	3	650	⅛	...	...	...	...	...	...	...	220

†Rated under ARI standard. ‡Same blower for inside, outside coils.

Wether-Bee—Heat Pump Systems, Inc., 232 S. River St., Aurora, Ill.																								
3WW-11	28	64	27¼	35,200	41,800	Water	1	2¶	...	...	...	...	...	...	...	...	Brunner	3	30H	3.18	...	...	...	310
5WW-11	28	64	27¼	55,000	63,360	Water	1	2¶	...	...	...	...	...	...	...	...	Brunner	5	50H	5.0	...	...	...	930
7WW-31	28	64	27¼	76,000	96,360	Water	1	2¶	...	...	...	...	...	...	...	...	Brunner	7½	75H	7.01	...	...	...	1050
10WW-31	58	72	32	98,500	139,300	Water	1	2¶	...	...	...	...	...	...	...	...	Brunner	10	100HP	9.3	...	...	...	1114
15WW-31	58	72	32	178,000	222,100	Water	1	2¶	...	...	...	...	...	...	...	...	Brunner	15	A23H	16.3	...	...	...	1839
20WW-31	58	72	32	238,000	293,410	Water	1	2¶	...	...	...	...	...	...	...	...	Brunner	20	A46H	21.0	...	...	...	2137
25WW-31	58	72	35	297,000	368,500	Water	1	2¶	...	...	...	...	...	...	...	...	Brunner	25	A53H	26.5	...	...	...	2445
3WAU-12	56	64	27¼	23,500	27,500	Water	1	2¶	...	...	...	...	3.0	7	800	¼	Brunner	3	30H	3.06	...	...	...	830
3WAU-12	56	64	27¼	35,500	43,400	Water	1	2¶	...	...	...	...	4.5	7	1,200	⅓	Brunner	3	30H	3.18	...	...	...	950
5WAU-12	56	64	27¼	55,000	63,200	Water	1	2¶	...	...	...	...	5.5	8	2,000	½	Brunner	5	50H	5.0	...	...	...	1190
7WAU-22	56	64	27¼	77,500	95,750	Water	1	2¶	...	...	...	...	7.5	8	3,000	¾	Brunner	7½	75H	8.7	...	...	...	1430
10WAU-32	100	72	32	98,500	128,800	Water	2	2¶	...	...	...	...	10.8	8	4,000	1	Brunner	10	100HP	10.8	...	...	...	1540
15WAU-32	100	84	32	178,000	222,100	Water	2	2¶	...	...	...	...	16.0	8	6,000	1	Brunner	15	A23H	17.2	...	...	...	2239
20WAU-32	100	84	32	238,000	293,410	Water	2	2¶	...	...	...	...	21.0	8	8,000	1½	Brunner	20	A46H	22.5	...	...	...	2537
25WAU-32	108	96	35	297,000	368,500	Water	2	2¶	...	...	...	...	26.0	8	10,000	2	Brunner	25	A53H	28.5	...	...	...	2945
3GAA-12	56	64	27¼	23,500	28,400	Solar-Earth	1	...	11.0	2	...	...	3.0	7	800	¼	Brunner	3	30C	3.18	...	...	...	840
5GAA-12	56	64	27¼	37,000	39,950	Solar-Earth	1	...	16.0	2	...	...	4.5	7	1,200	⅓	Brunner	5	50C	3.20	...	...	...	960
5GAA-12	56	64	27¼	58,000	61,280	Solar-Earth	1	...	25.0	2	...	...	5.5	8	2,000	½	Brunner	5	50C	4.80	...	...	...	1200
7GAA-12	56	64	27¼	71,000	88,000	Solar-Earth	1	...	36.0	2	...	...	7.5	8	3,000	¾	Brunner	7½	75C	7.0	...	...	...	1440
7AW2-31	28	64	27¼	73,300†	78,500‡	Air	1	...	18.0	6	10,980	1	...	...	...	...	Brunner	7½	A3D	8.6	...	Air Switch	...	2339
10AW2-31	58	72	35	96,500†	101,200‡	Air	1	...	33.0	5	18,500	1¼	...	...	...	...	Brunner	10	A4D	11.4	...	Air Switch	...	2684
15AW2-31	58	72	35	144,000†	150,300‡	Air	1	...	47.0	5	27,000	2	...	...	...	...	Brunner	15	B3D	16.5	...	Air Switch	...	3509
20AW2-31	58	72	35	196,500†	199,900‡	Air	1	...	47.0	6	28,000	3	...	...	...	...	Brunner	20	B4D	22.0	...	Air Switch	...	3823
25AW2-31	58	72	35	252,000†	250,100‡	Air	1	...	63.5	6	36,000	5	...	...	...	...	Brunner	25	B5D	27.0	...	Air Switch	...	5197
7AA2-31	84	72	32	72,300	78,500	Air	1	...	18.0	6	10,980	1	7.5	8	3,000	¾	Brunner	7½	A3D	9.7	...	Air Switch	...	2230
10AA2-31	84	72	32	96,500	101,200	Air	1	...	33.0	5	18,500	1¼	10.8	8	4,000	1	Brunner	10	A4D	12.8	...	Air Switch	...	2105
15AA2-31	84	84	32	144,000	150,300	Air	1	...	47.0	5	27,000	2	16.0	8	6,000	1	Brunner	15	B3D	18.0	...	Air Switch	...	2947
20AA2-31	84	84	32	196,500	199,900	Air	1	...	47.0	6	28,000	3	21.0	8	8,000	1½	Brunner	20	B4D	24.2	...	Air Switch	...	4525
25AA2-31	83	96	35	252,000	250,100	Air	1	...	63.5	6	36,000	5	26.0	8	10,000	2	Brunner	25	B5D	29.0	...	Air Switch	...	5830

†At 40° suction, 95° outside ambient. ‡At 20° outside ambient, heat pump only. §At 50° water. ¶R-12. #R-22. Filters optional, no room inside cabinet for them.

York—York Div., Borg-Warner Corp., York, Pa.																								
*P24FR	34¼	33¾	40	23,000†	20,300‡	Air	2#12	...	3.5	3	1,400	1/3	2.08	3	800¶	...	York	2	G2672	2.81	51.2**	Timer††	...	308
*P36FR	37¼	40½	42¼	34,000†	30,650‡	Air	5#2	...	4.88	4	2,000	1/2	2.77	4	1,200¶	...	York	3	H2780	3.56	70.5**	Timer††	...	425
*P48FR	39½	47¼	45¼	47,000†	42,400‡	Air	(2) 3#2	...	6.25	4	3,200	1/2	4.88	3	1,600¶	⅓	York	(2) 2	G2672	5.32	100.5**	Timer††	...	570
CA60R	52¾	36	36	60,000†	50,000‡	Air	...	...	9.0	3	4,200	1/2	5.35	3	2,000	¾	York	5	SA462	5.09	...	Timer	(2) 16x32¾x1	525
CA90R	64¾	36	36	90,000†	76,000‡	Air	...	...	13.6	3	6,000	1	8.75	3	3,000	1	York	7½	TA562	8.62	...	Timer	(4) 16x20x1	740

†Rated under ARI standard 210. ‡Heating rating conditions: 45° outdoor, 70° indoor. §At 0.25 sp. ¶At 0.36 sp. #At 0.45 sp. **Single phase. ††Optional.

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Contractors Get Chance at Free Trip By Mailing In Names of New Owners of Marley Equipment

KANSAS CITY, Mo. — The Marley Co. here has introduced a program that offers contractors an opportunity to be rewarded for extending a logical service to their customers.

For many years Marley has supplied to the air conditioning and refrigeration industry a steady flow of technical literature, much of which has been adopted as basic trade information. Now the company is amplifying its information service. It is inaugurating a "customer acceptance" program that, with the assistance of installing contractors, will assure product owners beneficial, nontechnical instruction in the use of cooling towers and air-cooled condensers.

"Experience acquired during the past 35 years indicates that many owners of packaged towers and condensers have insufficient knowledge of these products," says L. A. Christensen, Marley vice president and sales director. "Not enough owners are cognizant that the performance of these units is of utmost importance to satisfactory functioning of the entire system.

"Marley believes that it has not discharged its obligation to the owner until he is fully informed on the operation of his tower or condenser and on the simple, minimal maintenance that will assure him full service-life potential from the product he has purchased.

"We know that the informed owner receives greatest satisfaction from his investment in our products and in his complete installation. This is why we seek the cooperation of our contractor customers in this program that has the long-range benefit of making better customers for both Marley and the contractor."

As incentives to contractors who join in the effort, Marley offers three all-expense paid vacation trips, to be awarded at four-month intervals, one to each of three of those who participate. To be eligible for these awards, the contractor returns to the manufacturer a postcard giving the name and address of the owner of a tower or condenser so maintenance instructions written for the non-technical operator can be supplied by Marley.

Christensen pointed out that when a contractor returns a "customer certified" card, he will be eligible for any of the awards to be selected after the date the card is returned.

Kansas Town with Only 1 Traffic Light Boasts 11 Air Conditioned Businesses

(Continued from Page 1)

town's businessmen should make their profits from merchandising rather than from conserving every nickel that passes through their tills.

3. The "snowballing" effect of getting the first installations in and then letting competitive pressure help sell others.

The story begins early in 1959, according to Webber. At that time Webber had been in the plumbing, heating, and air conditioning business for himself just two years.

In his first year handling Rheem equipment, Webber installed one air conditioner—in a farm house. In 1958, he sold two residential air conditioners and a commercial job in the town mortuary. In 1959, he sold two more residential jobs and a commercial unit—in the drugstore next door to his shop.

This was the installation that broke the ice. Except for the unit in the bank across the street, this was the first air conditioning system in the business district.

Ralph Haskin's drugstore sits at the corner of Central and Main. Haskin, getting on in years, decided to remodel the store to make it easier to operate. He tore out the soda fountain, thereby eliminating the need for three employes, and put in attractive, modern self-service fixtures.

Webber, recalling what he read in trade magazines about the improved efficiency that can be expected from the air conditioned stores, took his story to Haskin.

He reminded Haskin that the drugstore had been one of the hottest in town during Kansas' searing summers. He recalled how Haskin himself had on more than one occasion shut the store early and gone home to soak in cold water.

Haskin remembered only too well. Webber's deal sounded attractive. He bought.

Webber installed a 5-ton Rheem split system, putting the condensing unit on the roof and hiding the air handling unit above a dropped ceiling at the rear of the store.

When asked what benefits he realized from air conditioning, Haskin put his own enjoyment foremost. He described how much better he and his wife felt while working.

He was not unmindful of the fact that customers felt better, too. They take their time about shopping and as a result, buy more on impulse.

"We sell more by accident now than we did before on purpose," is the way Haskin put it. "And we make more profit."

Early last year, Ralph and Phebe Leu closed up their hardware store at the end of the block and opened a modernized, remodeled store close to Haskin's drugstore. They now sell paints, varnishes, enamels, wallpaper, housewares, and gifts.

Webber talked convincingly to Leu about keeping his merchandise clean and presentable with filtered air and of the pleasures of working in a cool atmosphere.

Leu was convinced and Webber installed a furnace and a 2-ton air conditioner. The cooling unit was installed above a dropped ceiling over the small office at the rear of the 1,250-sq ft sales area. The condensing unit was set up behind the store.

Leu, too, cited his own comfort as the primary benefit he realized from air conditioning.

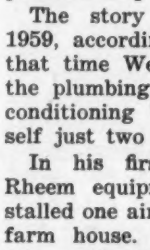
"It makes it enjoyable to come to work," he said.

The quietness of central air conditioning is also important to him. He has room air conditioners in his apartment upstairs, but is seriously con-

(Continued on next page)

CENTRAL AVE. in Harper, Kansas. Two years ago, only bank and drugstore (buildings at extreme left) were air conditioned. Today, Davis Paint Store, Ben Franklin, and Calverts (extreme right) are air conditioned and bank added more cooling. On opposite side of street newspaper plant and new post office were air conditioned last year.

BILL WEBBER (l.) checks up on the air conditioning installation that started the ball rolling through Harper's business district with R. W. Haskin, owner of the corner drugstore. Supply grille appears above Haskins' head while return grille appears at left.



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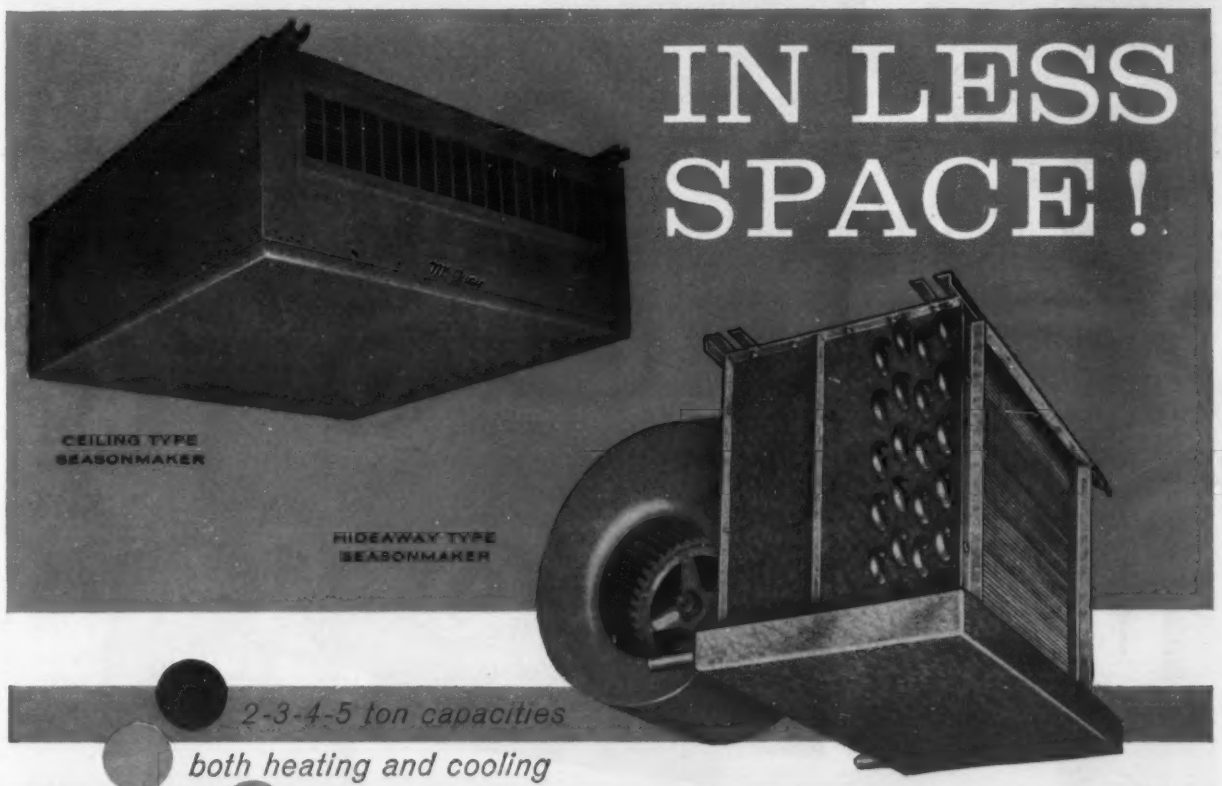

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McQuay INC.
AIR CONDITIONING • HEATING • REFRIGERATION

AT DAVIS PAINT STORE, Webber visits with Ralph Leu, owner. Air conditioner is mounted over ceiling of small office at rear of display floor.

AT PRINTING SHOP, Editor Bob Bolitho checks page forms for next week's Harper *Advocate*. Overhead is Rheem cooling unit that helps control temperature and humidity in the shop.

INSTALLING CONDENSING UNIT on slanted roof of print shop, Webber works with his son Don.

Kansas Town--

(Continued from preceding page)

sidering converting to a central system.

"The window units are too noisy and expensive to operate," he says, adding "It's nice not to have to fight a bunch of fans."

The Ben Franklin store a few doors away was the next to convert. Webber recalled that he had been talking to owner Charles Nickols for over a year about a new heating system (plus cooling) but without much progress.

One Cooled, Another To Be Cooled, Paper Tells Its Readers

However, the same issue of the Harper *Advocate* that headlined the opening of Leu's new air conditioned store also carried a story that the Ben Franklin store would be the next to air condition.

Webber installed a 3-ton Rheem air conditioner and a Rheem furnace.

Shortly thereafter, a new Calverts clothing store moved in from Winfield. Russell Calvert, owner, declared that there was no question about air conditioning the store. Air conditioning is policy for the chain Calvert is associated with.

Webber installed a 5-ton Rheem combined heating and cooling unit here.

Across the street, a new post office was constructed. Webber installed a 7-ton Lennox heating and air conditioning system there.

The Harper *Advocate* became the next to join the parade, installing a 5-ton Rheem ceiling suspended unit in the print shop.

Newspaper Decides To Practice What It Had Been Preaching

"After our quiet campaigning for air conditioning all year, we could hardly be without it ourselves," smiled Bolitho. "We need it particularly for humidity control around the presses," he added. A room unit cools his offices.

Bolitho expressed elation at Webber's success in air conditioning the town's business district.

"In a small town, you can't come right out and campaign editorially for air conditioning," Bolitho explained. "Relationships are too personnel.

"But I attempt to get people air conditioning conscious through humorous mentions of the subject in my "Hi Ho Harper" column. I make it front page news when a store adds air conditioning. Also in personal contacts with business people, I often hint that air conditioning might help their business.

In doing so, Bolitho emphasized, he isn't playing favorites to help out a single advertiser. (Webber buys small ads every week plus larger ads during the height of the heating and cooling seasons.) Bolitho believes that the future holds good promise for an expanded Harper and he wants all local merchants to be prepared for it.

"We can't help but grow," he continued. "There is the new turnpike that will run close by, and missile bases that are going to be set up near here.

"As the city of Wichita continues to grow, people will be moving further out and, we hope, they will find it more convenient to shop in Harper.

"Even now a number of our citizens work for Boeing Aircraft in Wichita and commute the 45 miles back and forth.

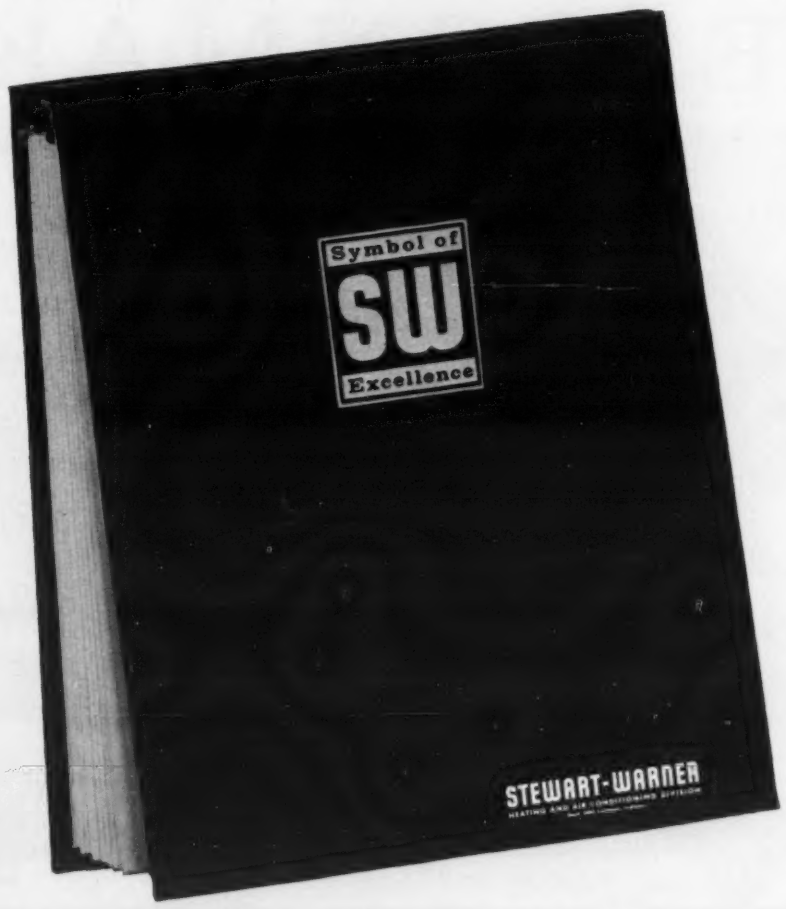
"Usually soft goods stores are the first to leave small towns for the big shopping centers. But the fact that a new clothing store has just moved into Harper, we take as a good omen."

Local Banker Sets Example In Harper

Bolitho gave credit for much of the town's revitalized spirit to the local banker. He has set an example with an extensive remodeling job on the bank, including the installation of 20 tons more air conditioning.

AMERICA'S MOST COMPLETE LINE OF OIL, GAS, ELECTRIC AND COAL HEATING AND COOLING EQUIPMENT

FOR SELECTED DEALERS ONLY...



The Stewart-Warner Corporation manufactures *only quality products* and sells them only *through competent dealers* who want to make a profit, not just swap dollars.

Therefore, in the near future, certain selected heating and air conditioning dealers throughout the country will be invited to see a presentation of Stewart-Warner's "Program for Profit." If you are among them, we believe you will find this visualization of the benefits of the Stewart-Warner Direct Factory Franchise to be *the most comprehensive blueprint for creating profitable business you have ever seen!* Especially if you feel that the line or lines of equipment you are now carrying can be sold only by beating somebody else's price.

The Stewart-Warner Direct Factory Franchise is a genuine opportunity for dealers who recognize that there is always a market for quality goods...always people who are willing and able to pay for better products. To these quality-conscious people, Stewart-Warner dealers everywhere are selling at an adequate profit...*because Stewart-Warner quality is easily demonstrated!*

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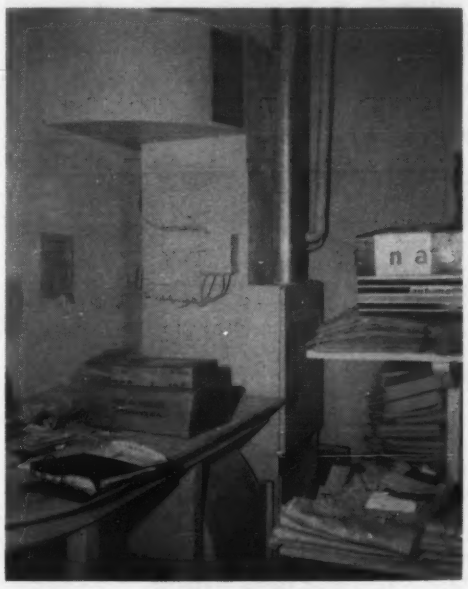

IN CALVERT'S shop, combination heating and cooling unit is tucked in corner of stockroom. Grille in supply duct heats back room. Round pipe is separate run to heat rest rooms.

Webber is installing that job now.

He put in four Trane furnaces and four Trane 5-ton air conditioners. Two of the air conditioners are tied together to handle the banking floor and the basement lounge and recreation room. The other two heat and cool four second floor apartments, each unit serving two apartments.

The system for the bank itself is controlled by two thermostats, one in the front and the other at the rear of the banking floor. They are set so that one unit will handle the entire load during mild weather and both will be used during hot spells.

In this way, Webber points out, the bank gets economy of operation and also protection against breakdown in either unit.

Only jobs that Webber did not get in Harper last year were a cafe, a supermarket, and a motel. These installations were split between his two local competitors.

Residential Cooling Rate Has Been Jumping

Webber commented that not only has one commercial job led to another, but the spurt has had an equally phenomenal effect on his residential cooling business.

From his previous rate of two installations a summer, he had jumped to 10 installations last year. Six of them, including one Bryant gas air conditioner, were installed in new homes and four in existing homes.

Who buys residential air conditioning in a small rural community like Harper? Two units were sold to retired farmers, two to farmers, two to bank clerks, two to the mortician, and one each to a factory worker, a lawyer, and a real estate operator.

"Best argument for selling residential cooling is that it is cheaper than room air conditioners and it keeps the whole house clean and cool," Webber said.

He pointed out that he has set up every furnace installation made in the past three years for air conditioning by installing a cooling plenum and insisted on using at least 6-in. pipe.

Webber noted that his own home is air conditioned, but not his shop. He recently bought a new building and is planning to move his business there soon. When he does, it will be air conditioned.

Although pleased with his performance last year, Webber believes the competitive leaven is just beginning to work.

"Just wait til next year," he predicts. "It should be even better."

Thinking of—

- **changing territories**
- **expanding your territory**
- **taking on new lines—**

Check the

CLASSIFIED ADS

Your opportunity may be there.

Morrison Steel Names 3 as Zone Managers

BUFFALO — Morrison Steel Products, Inc.'s appointment of Paul A. Hunker as southern field zone sales manager, Walter H. Kelly as midwestern field zone sales manager, Edward W. Foehl as northeastern field zone sales manager, and Arthur J. Seeds as factory representative for Ohio have been announced by Isadore Morrison, president.

The appointments are part of Morrison's expanded national sales plan. The appointees will represent the company's "Mor-Sun" furnaces and air conditioners, "Roly-Door," "Roly-House," and contract stampings.

Hunker for several years has been a sales executive in the air conditioning, heating, and refrigeration industry. Kelly was formerly regional sales manager for a generator manufacturing company. Foehl represented a group of laundry equipment firms in New England. Seeds has been associated with a plastic and asbestos manufacturing firm.

Air Conditioned Stores Increase Candy Sales

CHICAGO — Predicting that Americans will eat at least 3 billion pounds of candy and chocolate this year, compared with 2.9 billion pounds last year, Victor A. Bonomo, board chairman of the National Confectioners Association, listed added numbers of air conditioned retail stores as among favorable factors.

IN TUBING—Nothing Beats Copper!
IN COPPER—Nothing Beats
READING!

For
COPPER REFRIGERATION TUBE
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READING "LEKTROSEAL"®

Soft tempered easy forming — dehydrated

Soft coil in protective carton

Crimped ends seal out moisture and dirt

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COMMERCIAL COPPER TUBE
(In Varied Shapes)
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SMALL, SEAMLESS PRECISION
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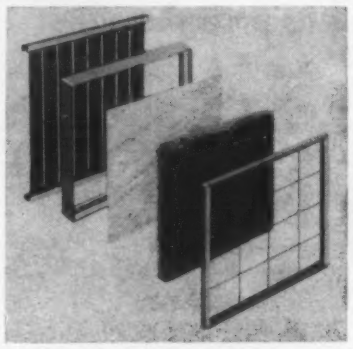
Distribution Depots:

READING, PA.
WOODSIDE, L. I., N. Y., 57-17 Northern Blvd.
PHILADELPHIA, PA., 921 No. Penn St.
ATLANTA, GA., 690 Murphy Ave., S.W., Unit 5, Bldg. B
CHICAGO, ILL., 305 W. 31st St.
CLEVELAND, OHIO, 1562 E. 55th St.
NEW ORLEANS, LA., 1102 St. Thomas St.
DENVER, COLO., 2635 Walnut St.
DALLAS, TEXAS, 9000 Sovereign Row
HOUSTON, TEXAS, 1121 Rothwell St.
OAKLAND, CALIF., 410 Hegenberger Rd.
LOS ANGELES, CALIF., 120 No. Santa Fe Ave.

COMPLETELY INTEGRATED QUALITY CONTROL, FROM OUR OWN REFINERY TO OUR OWN DISTRIBUTION DEPOTS

Combine Air Filter, Activated Charcoal Purifier

● New "Roto Aire" combination replacement media air filters and activated charcoal air purifiers said to offer an effective combination for cleaning and purifying air in new and existing systems have been announced by Burke & Co., Dept. AH&RN, 2902 Hyde Park Blvd., Los Angeles 43, Calif.

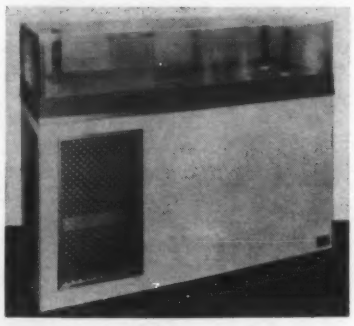


"Both air filter and adsorber sections are contained in a single case, especially developed for the slide-in type filter section of any standard air handling unit designed to accommodate a 2-in. air filter," the company said. "These units are flexible because they may be operated at varying velocities and in the filter section with varying densities and combinations of media, it was further pointed out.

"The adsorber section is comprised of a series of replaceable cartridges containing activated charcoal, which has the power of arresting noxious gases and vapors from ventilation and recirculated air."

Want More Details?

ADDITIONAL details on products that are described on these pages may be obtained by writing the manufacturer at the address given in each What's New story.



Offers Self-Contained Lobster Pool

● An "Ocean Fresh" self-contained lobster pool is being marketed by Dayno Sales Co., Dept. AH&RN, 678 Washington St., Lynn, Mass.

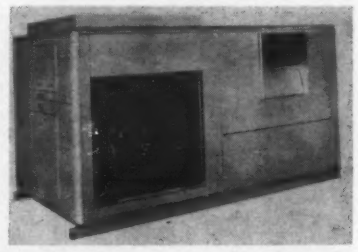
The firm manufactures two standard models. Model 501 measures 2 ft by 5 ft by 49 in., has a capacity of 100 lbs, and uses a ½-hp Tecumseh compressor. Other features include 1/20-hp Gorman Rupp pump, Ranco automatic temperature and pressure control, and 30-ft refrigeration coil treated with bitumastic paint to withstand seawater. Model 800 is 3 ft by 8 ft by 43 in., has a 225-lb capacity, and uses a ¾-hp compressor and ⅓-hp pump.

Among common features are casters, gravity filter system, design which permits charging the entire solution "in a matter of minutes," and built-in reservoir tank "which permits cleaning the display tank without throwing away the solution."

Air-Cooled Conditioner Available In 6 Models

● The company's completely self-contained, air-cooled air conditioning unit Type SCAC is available in six basic models from 10 through 40-ton capacities, according to Governair Corp., Dept. AH&RN, 4840 N. Sewell, Oklahoma City, Okla.

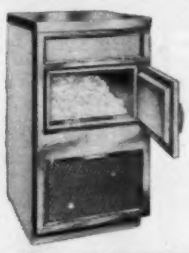
"Flexibility has been maintained with a choice of 4, 5, or 6-row cooling coils offered to meet all capacity requirements," the company said. "Roof mounting has been considered in the low-silhouette arrangements.



"The basic one-piece cooling unit is housed in a weatherized cabinet and mounted on rails. It is completely wired, charged, and tested at the factory. Demountable and remote arrangements are available, and accessories include choice of filters, face and by-pass dampers, reduced voltage starters, low ambient control, and the gas-fired furnace section."

World's Largest Line!

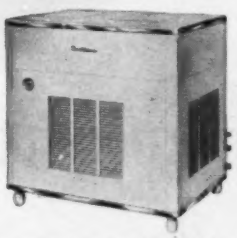
World's Largest Seller!



Super Flaker Model DF-4. Makes up to 100 lbs. of perfect crushed ice daily. Stores 40 lbs. in self-contained insulated bin.

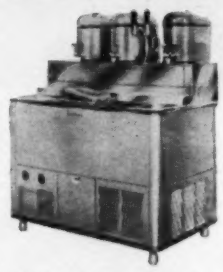
Super Flaker Model SF-2F. Produces a continuous flow of up to 550 lbs. of crushed ice daily. Similar models are also available with daily capacities of 350, 1050 and 2000 lbs.

Super Flaker Model SF-3W-SFA. Makes up to 1050 lbs. per day, stores 350 lbs. Similar models make 200, 350 and 550 lbs. daily.



Super Flaker Model SF-8. Makes a continuous supply of up to two tons of crushed ice daily . . . ideal for volume ice users! Takes only 5 sq. ft. of floor space.

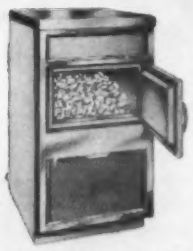
Super Bin with Super Flaker. Choose among 16 models designed as companion units for Scotsman Super Flakers. Model shown stores 750 lbs. of ice.



Model SD-2. Handy drink dispenser makes and stores its own ice . . . up to 550 lbs. per day! Single-head model also available.

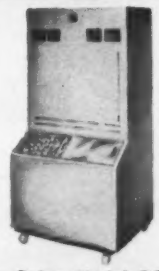
Modernize with Modern Ice...Step up to a

SCOTSMAN!



Super Cuber Model DC-3. Makes up to 50 lbs. of perfect cubed ice daily. Stores 35 lbs. in self-contained insulated bin.

Super Cuber Model SC-200F. Makes up to 225 lbs. per day, stores 150 lbs. Similar model makes 110 lbs., stores 75 lbs.



Super Cuber Model SC-500E. Makes up to 500 lbs. of 100% pure Super Cubes daily. Stainless steel bin stores 400 lbs. of ice.

MAIL COUPON TODAY!

SCOTSMAN

Modernize with Modern Ice!

ICE MACHINES

YES! Send me complete information about a franchise for Scotsman Ice Machines.

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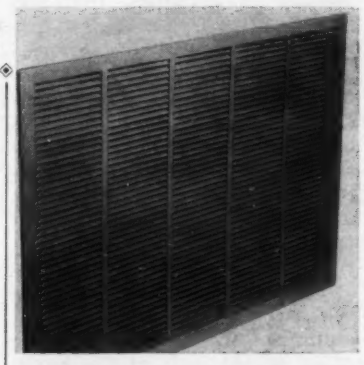
MAIL TO: **SCOTSMAN ICE MACHINES**
Queen Products Division of King-Seeley Thermos Co.
203 Front Street, Albert Lea, Minnesota
EXPORT OFFICE: 15 William St., New York, N.Y.

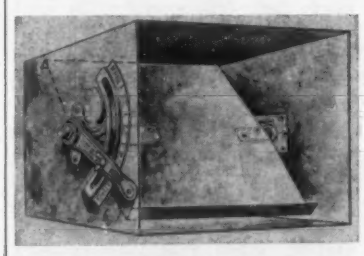


High Capacity Return Air Grille Added

● A new series of "high capacity" return air grilles known as No. 64 Design, has been added to its line by Hart & Cooley Mfg. Co., Dept. AH&RN, Holland, Mich.

These are for use in central return air systems, general ventilation, for providing combustion air in utility rooms, ventilation in confined spaces, and return air for perimeter systems.

The angular fin design used in these grilles is claimed to provide greater free area. "The fins are spaced ½ in. apart and when set at a 30° angle the openings are virtually vision-proof."



Damper Regulator Set Features Quietness

● A development by Elgen Mfg. Co., Dept. AH&RN, 32-49 Gale Ave., Long Island City 1, N. Y., is claimed to provide rattle-proof and leakproof damper regulator installations.

Called "Quadra-Matic," the damper regulator set was "designed by Elgen engineers expressly for top quality ductwork and high velocity systems," the company said.

One of its features "is a unique polyethelene sealer component that is placed into the quadrant handle," it was stated. "When the handle is fitted on the square end bearing of the damper blade, and set flush against the side of the duct, a 100% airtight contact is assured. In addition, the shaft of the square end bearing is knurled to hold the sealer securely. Once the quadrant and handle are in final position, all rattles are completely done away with."

Compressor Data

Data on most compressor models used by manufacturers who submitted specifications in this and the Jan. 30 Room Conditioner Specifications issue is published below. Specifications data includes compressor model number. Locate number in table for more information.

Model No.	Type	Hp.	Cooling Method	Cyl-inders	Bore	Stroke	R.P.M.
AIRTEMP							
3002-4	Hermetic	2½	Suction	1	1 7/8	1 5/32	3500
3003-4	Hermetic	3	Suction	1	1 7/8	1 1/2	3500
3004-00	Hermetic	4	Suction	2	1 7/8	63/64	3500
3005-02	Hermetic	5	Suction	2	1 7/8	1 3/16	3500
3008-1	Semi-H.	7½	Suction	5	1 7/8	1 1/2	1750
3008-2	Hermetic	7½	Suction	2	1 7/8	1 25/32	3500
3011-1	Semi-H.	10	Suction	5	1 7/8	1 1/2	3500
30015-1	Semi-H.	15	Suction	5	1 7/8	1 1/2	3500
BENDIX-WESTINGHOUSE							
CH211SA-1	Hermetic	1	Suction	1	1 19/32	1 1/16	1725
CH286TA-2	Hermetic	1	....	2	1 9/16	3/4	1725
CH310TA-2	Hermetic	1	....	2	1 5/8	3/4	1725
CH325TA-2	Hermetic	1	....	2	1 21/32	3/4	1725
CH383TA-2	Hermetic	1.5	....	2	1 9/16	1	1725
CH400TA-2	Hermetic	1½	....	2	1 19/32	1	1725
CH420TA-2	Hermetic	1.75	....	2	1 5/8	1	1725
CH490TA-2 H490TA	Hermetic	2	....	2	1 5/8	1 3/16	1725
H980TA-2	Hermetic	4	....	4	1 5/8	1 3/16	1725
YCH1020TA-2	Hermetic	4	Suction	2	2 21/32	1 3/16	3450
YCH161VA-2	Hermetic	1	....	1	1 1/4	21/32	3450
YCH161VA-1	Hermetic	1	Suction	1	1 1/4	5/8	3450
YCH213VA-2	Hermetic	1	Suction	1	1 3/8	23/32	3450
YCH222VA-2	Hermetic	2	....	1	1 3/8	3/4	3450
YH700TA-2, 3	Hermetic	2.5	....	2	1 5/8	27/32	3450
YH830TA-2	Hermetic	3	....	2	1 5/8	1	3450
YH1400TA-2	Hermetic	5	....	4	1 5/8	27/32	3450
BRUNNER							
10HF	Hermetic	1	Suction	2	1 1/2	1 1/4	....
20H	Hermetic	2	Suction	2	1 13/16	1 1/2	....
30H	Hermetic	3	Suction	2	2 3/16	1 1/2	....
50H, HF	Hermetic	5	Suction	4	2	1 1/2	....
75H	Hermetic	7½	Suction	6	2	1 1/2	....
75HF	Hermetic	7.5	Suction	4	2	1 1/2	1750
100HF	Hermetic	10	Suction	4	2 3/16	1 1/2	1750
150HF, PHF	Hermetic	15	Suction	6	2 3/16	1 1/2	1750
20C	Hermetic	2	Suction	2	2	1 1/2	....
30C	Hermetic	3	Suction	4	1 13/16	1 1/2	....
50C	Hermetic	5	Suction	4	2 3/16	1 1/2	....
75C	Hermetic	7½	Suction	6	2 3/16	1 1/2	....
A3H	Semi-H.	15	Suction	3	2 3/4	2 3/16	....
A4H	Semi-H.	20	Suction	4	2 3/4	2 3/16	....
A5H	Semi-H.	25	Suction	5	2 3/4	2 3/16	....
A3D	Open	....	Suction	3	2 3/4	2 3/16	....
A4D	Open	....	Suction	4	2 3/4	2 3/16	....
A5D	Open	....	Suction	5	2 3/4	2 3/16	....
B3D	Open	....	Suction	3	3 1/2	2 5/8	....
B4D	Open	....	Suction	4	3 1/2	2 5/8	....
B5D	Open	....	Suction	5	3 1/2	2 5/8	....
BRYANT							
6D24-A679	Semi-H.	3	Suction	2	2	1 3/8	1725
6D28-B609	Semi-H.	3½	Suction	2	2	1 1/4	1725
6D44-A679	Semi-H.	5	Suction	4	2	1 7/16	1725
6D48-B289	Semi-H.	6	Suction	4	2	1 7/16	1725
CARRIER							
CD-28	Hermetic	....	Suction	2	2	1 1/4	1750
6D24-C	Hermetic	....	Suction	2	2	1 3/8	1750
6D-44	Hermetic	....	Suction	4	2	1 7/16	1750
6D-45	Hermetic	....	Suction	4	1 13/16	1 1/4	1750
6D-47	Hermetic	....	Suction	4	2	1 7/16	1750
6D-48	Hermetic	....	Suction	4	2	1 7/16	1750
6D-68	Hermetic	....	Suction	6	2	1 1/4	1750
6D-73	Hermetic	....	Suction	6	2	1 15/16	1750
6D-75	Hermetic	....	Suction	6	2	1 15/16	1750
6A-25	Hermetic	....	Suction	2	1 5/8	1	3500
6A-35	Hermetic	....	Suction	3	1 5/8	1	3500
COPELAND							
UH-9	Hermetic	1	Air	2	1 1/2	15/16	1750
UW-8-100C	Hermetic	1	Air	2	1 11/16	15/16	1750
UH9100P	Welded	1	Suction	2	1 1/2	15/16	1750
UJ9150P	Welded	1½	Suction	2	1 21/32	15/16	1750
UJ11-150P	Welded	1½	Suction	2	1 21/32	15/16	1750
USS13-200P	Welded	2	Suction	2	1 13/16	15/16	1750
NR40-400	Hermetic	4	Suction	2	2 1/4	1 7/16	1750
NR46-500, 1, 2C NRA2-0500-TFC	Hermetic	5	Suction	2	2 7/16	1 7/16	1750
8R28-302 ERF1-0310-TAC	Hermetic	3	Suction	2	1 7/8	1 3/8	1750
4U26-401, 2	Hermetic	4	Suction	4	1 13/16	1 1/32	1750
4US1-501, 2	Hermetic	5	Suction	4	1 13/16	1 1/4	1750
3R42-300	Semi-H.	3	Suction	2	2 5/16	1 3/8	1750
MRG-750, 751F	Semi-H.	7.5	Suction	2	2 7/16	1 13/16	1750
MRG-760, 761F MRH1-0760-TFC	Semi-H.	7.5	Suction	2	2 9/16	1 13/16	1750
9R9-1000	Semi-H.	10	Suction	3	2 3/8	2	1750
9R8-1000	Semi-H.	10	Suction	3	2 3/16	2	1750
4R48-1506	Semi-H.	15	Suction	4	2 1/2	2	1750
4R48-2006 4RA1-2006	Semi-H.	20	Suction	4	2 1/2	2	1750
6R48-3006	Semi-H.	30	Suction	6	2 1/2	2	1750
DIALATEMP							
D156D75	Semi-H.	15	Suction	6	2	1 15/16	1750
D106D68	Semi-H.	10	Suction	6	2	1 1/4	1750
D406L45	Semi-H.	40	Suction	4	3 1/4	2 3/4	1750
D506L63	Semi-H.	50	Suction	6	3 1/4	2 3/4	1750
D606L65	Semi-H.	60	Suction	6	3 1/4	2 3/4	1750
D756L85	Semi-H.	75	Suction	8	3 1/4	2 3/4	1750
D1006L123	Semi-H.	100	Suction	12	3 1/4	2 3/4	1750
D1256L125	Semi-H.	125	Suction	16	3 1/4	2 3/4	1750
YORK							
F2656P	Hermetic	1½	Gas	2	1 3/4	7/8	1750
G2672P	Hermetic	2	Gas	2	1 3/4	1 7/8	1750
H2780H	Hermetic	3	Gas	2	1 7/8	1 1/4	1750
501	Hermetic	6.5	Gas	6	1 3/4	13/16	1750
TA682	Hermetic	8.75	Gas	6	1 3/4	1 9/32	1750
SA482	Hermetic	6.5	Gas	4	1 3/4	1 9/32	1750
HA364	Hermetic	3	Gas	3	1 3/4	1	1750
HA380	Hermetic	3	Gas	3	1 3/4	1 1/4	1750
JA482	Hermetic	5	Gas	4	1 3/4	1 9/32	1750
KA682	Hermetic	7.5	Gas	6	1 9/32	1 3/4	1750
H-103-E	Acces. H.	10	Gas	3	2 5/8	2 1/4	1750
H-153 E	Acces. H.	15	Gas	3	2 5/8	2 1/4	1750
H-206 E	Acces. H.	20	Gas	6	2 5/8	2 1/4	1750
H-256 E	Acces. H.	25	Gas	6	2 5/8	1 7/8	1750
H-306 E	Acces. H.	30	Gas	6	2 5/8	2 1/4	1750
H-309 E	Acces. H.	30	Gas	9	2 5/8	2 1/4	1750
H-459 E	Acces. H.	40	Gas	9	2 5/8	2 1/4	1750

(Continued on Page 60, Col. 1)

Packaged Liquid Chillers

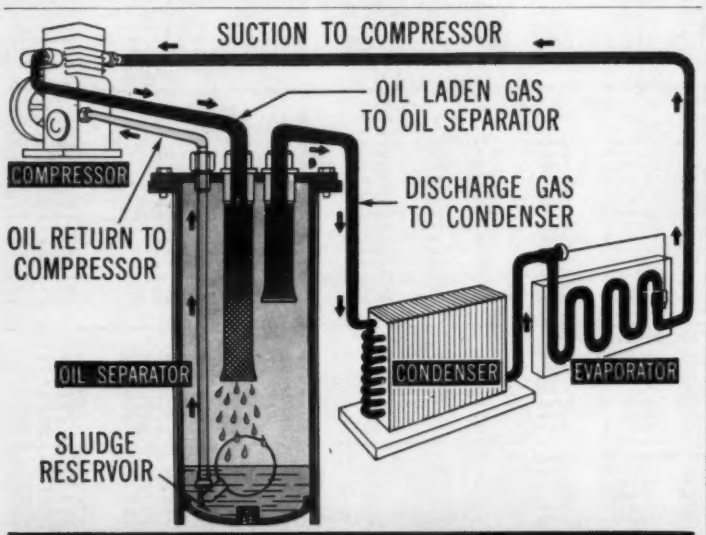
Model No.	Capacity (Nom. Tons)	Overall Dimensions (In.) Height	Length	Depth	Operating Weight (Lbs)	Compressor Make	Compressor Type	Compressor Motor Hp	RPM	Volts	Refrigerant No.	Charge	Cooler Type	Condenser Type
Addison—Addison Products Co., Addison, Mich.														
CW-3	3.2	34	28	18	325	Copeland	Semi-H.	3	1750	208/230	R-22	6	Shell & Coil	Tube-In-Tube
CW-5	5.7	36	36	18	535	Copeland	Semi-H.	5	1750	208/230	R-22	9	Shell & Coil	Tube-In-Tube
CW-7½	7.3	46	42	27	750	Copeland	Semi-H.	7½	1750	208/230	R-22	12	Shell & Coil	Tube-In-Tube
CW-10	9.4	46	42	30	870	Copeland	Semi-H.	10	1750	208/230	R-22	15	Shell & Coil	Tube-In-Tube
CW-15	16.3	46	45	34	1230	Copeland	Semi-H.	15	1750	208/230	R-22	24	Shell & Coil	Tube-In-Tube
Airtemp—Airtemp, Div. of Chrysler Corp., P. O. Box 1037, Dayton 1, Ohio														
SW-1308-2	7.6	49	50¾	19¾	1050	Airtemp	Semi-H.	7½	1750	208/230/440	R-22	Holding	Direct-X	Shell & Coil
SW-1311	11.5	58	52	28	1150	Airtemp	Semi-H.	10	3500	208/230/440	R-22	Holding	Direct-X	Shell & Coil
SW-1315	14.9	58	52	28	1260	Airtemp	Semi-H.	15	3500	208/220/440	R-22	Holding	Direct-X	Shell & Coil
SW-1322	20.7	60	96	34¾	2700	Airtemp	Semi-H.	(2)10	3500	208/220/440	R-22	Holding	Direct-X	Shell & Coil
SW-1327	24.5	60	96	34¾	2850	Airtemp	Semi-H.	10/15	3500	208/220/440	R-22	Holding	Direct-X	Shell & Coil
SW-1333	29.4	63	96	34¾	3200	Airtemp	Semi-H.	(3)15	3500	208/220/440	R-22	Holding	Direct-X	Shell & Coil
SW-1345	45.2	63	130¼	40¼	4800	Airtemp	Semi-H.	(3)15	3500	208/220/440	R-22	Holding	Direct-X	Shell & Coil
WE-22-22	16.7	71½	106	36	3300	Airtemp	Open D	20	1750	As required	R-22	Holding	Direct-X	Shell & Tube
WE-322	24.4	74¼	98	36	3550	Airtemp	Open D	25	1750	As required	R-22	Holding	Direct-X	Shell & Tube
WE-36-22	27.8	74¼	98	36	3950	Airtemp	Open D	30	1750	As required	R-22	Holding	Direct-X	Shell & Tube
WE-522	40.8	73¼	121	36	4700	Airtemp	Open D	40	1750	As required	R-22	Holding	Direct-X	Shell & Tube
WE-6422	49.6	74¼	121	36	5300	Airtemp	Open D	50	1750	As required	R-22	Holding	Direct-X	Shell & Tube
WE-722	55.5	75	121	36	5500	Airtemp	Open D	60	1750	As required	R-22	Holding	Direct-X	Shell & Tube
W-822	64.0	80	155	41	7560	Airtemp	Open D	75	1750	As required	R-22	Holding	Direct-X	Shell & Tube
W-8522	74.8	80	155	42	8100	Airtemp	Open D	75	1750	As required	R-22	Holding	Direct-X	Shell & Tube
W-1022	78.3	80	155	42	8400	Airtemp	Open D	100	1750	As required	R-22	Holding	Direct-X	Shell & Tube
W-1222	95.6	85½	155	42	9500	Airtemp	Open D	100	1750	As required	R-22	Holding	Direct-X	Shell & Tube
W-1422	109.8	85½	155	43	9800	Airtemp	Open D	125	1750	As required	R-22	Holding	Direct-X	Shell & Tube
Arkla-Servel—Arkla Air Conditioning Corp., 812 Main St., Little Rock, Ark.														
500-C	†	65¾	84¼*	30¾	....	Absorption	System	....	....	Absorption	Water	....	Shell & Tube	Shell & Tube
†Chiller-heater producing 42,000 Btuh on cooling, 96,000 Btuh on heating. *Includes built-in cooling tower.														
Capitolaire—Crane Co., Miami, Okla														
201-3-CW	1.8	27¼	23¼	17⅝	230	Tecumseh	Herm.	2	1750	230/208/220	R-22	2# 4	Tube-In-Tube	Tube-In-Tube
201-3-CW	2.8	27¼	23¼	17⅝	280	Tecumseh	Herm.	3	1750	230/208/220	R-22	2# 12	Tube-In-Tube	Tube-In-Tube
501-3-CW	5.0	34⅛	33	20	380	Tecumseh	Herm.	5	1750	230/208/220	R-22	5# 5	Tube-In-Tube	Tube-In-Tube
201-3-CAR	1.65	27¼*	23¼*	27⅝*	300*	Tecumseh	Herm.	2	1750	230/208/220	R-22	6	Tube-In-Tube	Finned Tube
301-3-CAR	2.4	27¼*	23¼*	17⅝*	250*	Tecumseh	Herm.	3	1750	230/208/220	R-22	6	Tube-In-Tube	Finned Tube
501-3-CAR	4.45	34⅛*	33*	20*	340*	Tecumseh	Herm.	5	1750	230/208/220	R-22	10	Tube-In-Tube	Finned Tube
CHL-1W-A8H	7.0	45¼	77⅛	31¼	1140	Copeland	Semi-H.	7½	1750	208/220/440	R-22	12	Shell & Tube	Shell & Tube
CHL-1W-A10H	9.5	45¼	78⅝	31¼	1230	Copeland	Semi-H.	10	1750	208/220/440	R-22	18	Shell & Tube	Shell & Tube
CHL-1W-B15H	13.6	59⅛	89¼	31¼	2160	Copeland	Semi-H.	(2) 7½	1750	208/220/440	R-22	(2)12	Shell & Tube	Shell & Tube
CHL-1W-B20H	19.2	63¼	80½	31¼	2980	Copeland	Semi-H.	(3)10	1750	208/220/440	R-22	(2)18	Shell & Tube	Shell & Tube
CHL-1W-B25H	24.0	65½	82¼	31¼	3120	Copeland	Semi-H.	(2)17½	1750	208/220/440	R-22	(2)32	Shell & Tube	Shell & Tube
CHL-1W-B30H	27.5	65¼	82¼	31¼	3900	Copeland	Semi-H.	10/17½	1750	208/220/440	R-22	18/32	Shell & Tube	Shell & Tube
CHL-1E-A8H	7.1	58⅛	119⅝	35¼	2200	Copeland	Semi-H.	7½	1750	208/220/440	R-22	25	Shell & Tube	Evaporative
CHL-1E-A10H	9.6	67⅞	120⅝	41¼	2540	Copeland	Semi-H.	10	1750	208/220/440	R-22	32	Shell & Tube	Evaporative
CHL-1E-B15H	13.9	73⅝	144½	41¼	3220	Copeland	Semi-H.	(3) 7½	1750	208/220/440	R-22	(2)25	Shell & Tube	Evaporative
CHL-1E-B20H	19.2	82⅝	137⅛	51¼	4000	Copeland	Semi-H.	(3)10	1750	208/220/440	R-22	(2)32	Shell & Tube	Evaporative
CHL-1E-B25H	24.0	82⅝	147⅛	51¼	5360	Copeland	Semi-H.	10/17½	1750	208/220/440	R-22	32/55	Shell & Tube	Evaporative
CHL-1E-B30H	27.5	87⅛	152	55¼	6350	Copeland	Semi-H.	(2)17½	1750	208/220/440	R-22	(2)55	Shell & Tube	Evaporative
*Unit only, excludes air cooled condenser.														
Carrier—Carrier Air Conditioning Co., Carrier Pkwy., Syracuse 1, N. Y.														
30E5	5	38⅝	72⅛	25¼	880	Carrier	Herm.	5	1750	220/440	R-22	9	Direct-X	Shell & Coil
30E8	8	40¼	75⅛	27¼	1040	Carrier	Herm.	8	1750	220/440	R-22	13	Direct-X	Shell & Coil
30E10	10	46	75	27⅝	1270	Carrier	Herm.	10	1750	220/440	R-22	17	Direct-X	Shell & Coil
30HH015*	15	54⅜	72	25	1940	Carrier	Herm.	15	1750	220/440	R-22	44	Direct-X	Shell & Coil
30HH020*	20	54⅜	72	25	2150	Carrier	Herm.	20	1750	220/440	R-22	46	Direct-X	Shell & Coil
30HH025*	25	54⅜	72	25	2210	Carrier	Herm.	25	1750	220/440	R-22	46	Direct-X	Shell & Coil
30HH030*	30	54⅜	72	25	2270	Carrier	Herm.	30	1750	220/440	R-22	46	Direct-X	Shell & Coil
30HH045*	45	79	80	30	3280	Carrier	Herm.	45	1750	220/440	R-22	69	Direct-X	Shell & Coil
30HH055*	55	80⅝	105	30	5158	Carrier	Herm.	55	1750	220/440	R-22	92	Direct-X	Shell & Tube
30HH065*	65	80⅝	105	30	5238	Carrier	Herm.	65	1750	220/440	R-22	92	Direct-X	Shell & Tube
30AA075*	75	52	102	54	4575	Carrier	Herm.	75	1750	220/440	R-22	92	Direct-X	Shell & Tube
30AA080*	80	52	104	58	5505	Carrier	Herm.	80	1750	220/440	R-22	115	Direct-X	Shell & Tube
30AA090*	90	56	123	54	4640	Carrier	Herm.	90	1750	220/440	R-22	140	Direct-X	Shell & Tube
30AA100*	100	56	123	58	5570	Carrier	Herm.	100	1750	220/440	R-22	160	Direct-X	Shell & Tube
30AA115*	115	61	105	58	5685	Carrier	Herm.	115	1750	220/440	R-22	180	Direct-X	Shell & Tube
30AA125*	125	61	105	62	6805	Carrier	Herm.	125	1750	220/440	R-22	200	Direct-X	Shell & Tube
*Also available without condensers as 30HJ and 30BA models.														
Chill-A-Tron—Kritzer Products, 5900 N. Pulaski Rd., Chicago 46, Ill.														
2WCW-1 or 3	2	35	32	11¼	250	Tecumseh	Herm.	2	1750	220	R-22	2#8	Tube-In-Tube	Tube-In-Tube
3WCW-1 or 3	3	31	42½	14¼	300	Tecumseh	Herm.	3	1750	220	R-22	3#3	Tube-In-Tube	Tube-In-Tube
5WCW-1 or 3	5	35	66	16	450	Tecumseh	Herm.	5	1750	220	R-22	5#4	Tube-In-Tube	Tube-In-Tube
7½WCW-3	7½	36	53	22	700	York	Herm.	7½	1750	220	R-22	13#8	Tube-In-Tube	Tube-In-Tube
10WCW-3	10	37	66	23	1100	Tecumseh	Herm.	10	1750	220	R-22	10#8	Tube-In-Tube	Tube-In-Tube
15WCW-3	15	34	99	28	1350	York	Herm.	15	1750	220	R-22	17#	Tube-In-Tube	Tube-In-Tube
22½WCW-3	22½	40½	99	30	1600	York	Herm.	22½	1750	220	R-22	40#8	Tube-In-Tube	Tube-In-Tube
Chill-A-Tron—Peerless of America, Inc., 5800 N. Pulaski Rd., Chicago 46, Ill.														
2WCW-1 or 3	2	35	32	11¼	250	Tecumseh	Herm.	2	1750	220	R-22	2#8	Tube-In-Tube	Tube-In-Tube
3WCW-1 or 3	3	31	42½	14¼	300	Tecumseh	Herm.	3	1750	220	R-22	3#3	Tube-In-Tube	Tube-In-Tube
5WCW-1 or 3	5	35	66	16	450	Tecumseh	Herm.	5	1750	220	R-22	5#4	Tube-In-Tube	Tube-In-Tube
7½WCW-3	7½	36	53	22	700	York	Herm.	7½	1750	220	R-22	13#8	Tube-In-Tube	Tube-In-Tube
10WCW-3	10	37	66	23	1100	Tecumseh	Herm.	10	1750	220	R-22	10#8	Tube-In-Tube	Tube-In-Tube
15WCW-3	15	34	99	28	1350	York	Herm.	15	1750	220	R-22	17#	Tube-In-Tube	Tube-In-Tube
22½WCW-3	22½	40½	99	30	1600	York	Herm.	22½	1750	220	R-22	40#8	Tube-In-Tube	Tube-In-Tube
Circle-Vec—The Forston Co., 2117-19 Judiway St., Houston 18, Texas														
300-CVC	3	30	53	30	900	Tecumseh	Herm.	3	1750	208/220/230	R-22	10	Tube-In-Tube	Finned Tube
400-CVC	4	30	53	30	1100	Tecumseh	Herm.	4	1750	208/220/230/440	R-22	12	Tube-In-Tube	Finned Tube
500-CVC	5	43	65	44	1200	Tecumseh	Herm.	5	1750	208/220/230/440	R-22	14	Tube-In-Tube	Finned Tube
750-CVC	7½	43	65	44	1700	Copeland	Semi-H.	7½	1750	208/220/440	R-22	18	Tube-In-Tube	Finned Tube
1000-CVC	10	53½	72	42	1850	Copeland	Semi-H.	10	1750	208/220/440	R-22	22	Tube-In-Tube	Finned Tube
1500-CVC	15	42	106	46	2044	Copeland	Semi-H.	15	1750	208/220/440	R-22	40	Tube-In-Tube	Finned Tube
2000-CVC	20	53	106	46	2345	Copeland	Semi-H.	20	1750	208/220/440	R-22	54	Tube-In-Tube	Finned Tube
3000-CVC	30	60	144	51½	3680	Copeland	Semi-H.	30	1750	208/220/440	R-22	85	Tube-In-Tube	Finned Tube
Comfort-Aire—Heat Controller, Inc., 1900 Wellworth Ave., Jackson, Mich.														
HCA-351/WC-35	2.4	23⅝	30	27⅞	265	Tecumseh	Herm.	3	1725	208/230	R-22	11	Tube-In-Tube	Finned Tube
HCA-411/WC-41	4.3	26½	48½	33	455	Tecumseh	Herm.	5	1725	208/230	R-22	20	Tube-In-Tube	Finned Tube
CW-3	3.2	34	28	18	325	Copeland	Semi-H.	3	1750	208/220	R-22	6	Shell & Coil	Tube-In-Tube
CW-5	5.7	36	36	18	535	Copeland	Semi-H.	5	1750	208/230	R-22	9	Shell & Coil	Tube-In-Tube
CW-75	7.3	46	42	27	750	Copeland	Semi-H.	7½	1750	208/230	R-22	12	Shell & Coil	Tube-In-Tube
CW-10	9.4	46	42	30	870	Copeland	Semi-H.	10	1750	208/230	R-22	15	Shell & Coil	Tube-In-Tube
CW-15	16.3	46	45	34	1230	Copeland	Semi-H.	15	1750	208/230	R-22	24	Shell & Coil	Tube-In-Tube
Curtis—Curtis Mfg. Co., 1905 Kienlen Ave., St. Louis 33, Mo.														
F7HC8G6	7½	46¼	91⅝	33½	1420	Copeland	Semi-H.	7½	1750	208/220/440/550	R-22	35	Shell & Tube	Shell & Coil
F10H2C8G6	10	48¼	91⅝	33½	1630	Copeland	Semi-H.	(2)5	1750	208/220/440/550	R-22	40	Shell & Tube	Shell & Tube
F15H2C8G6	15	50¼	91⅞	33½	2000	Copeland	Semi-H.	(2)7½	1750	208/220/440/550	R-22	50	Shell & Tube	Shell & Tube
F20H2C8G6	20	50¼	91⅞	33½	2310	Copeland	Semi-H.	(2)10	1750	208/220/440/550	R-22	55	Shell & Tube	Shell & Tube
10HC8G6	10	48¼	91⅝	33½	1600	Curtis	Semi-H.	10	1750	208/220/440/550	R-12	45	Shell & Tube	Shell & Tube
15HC8G6	15	50¼	91⅞	33½	2150	Curtis	Semi-H.	15	1750	208/220/440/550	R-12	55	Shell & Tube	Shell & Tube
F15HC8G6	15	50¼	91⅞	33½	1940	Curtis	Semi-H.	15	1750	208/220/440/550	R-22	50	Shell & Tube	Shell & Tube
F20HC8G6	20	50¼	91⅞	33½	2300	Curtis	Semi-H.	20	1750	208/220/440/550	R-22	55	Shell & Tube	Shell & Tube
25HC10G7	25	59½	104	36¼	3220	Curtis	Semi-H.	25	1750	208/220/440/550	R-12	70	Shell & Tube	Shell & Tube
F25HC10G7	25	59½	104	36¼	2940	Curtis	Semi-H.	25	1750	208/220/440/550	R-22	65	Shell & Tube	Shell & Tube
F30HC10G7	30	59½	104	36¼	3300	Curtis	Semi-H.	30	1750	208/220/440/550	R-22	75	Shell & Tube	Shell & Tube
40HC12G8	40	61½	116⅝	36⅝	4160	Curtis	Semi-H.	40	1750	208/220/440/550	R-12	100	Shell & Tube	Shell & Tube
F40HC12G8	40	61½	116⅝	36⅝	3990	Curtis	Semi-H.	40	1750	208/220/440/550	R-22	90	Shell & Tube	Shell & Tube
F50HC14G8	50	63⅝	116⅝	38¼	4650	Curtis	Semi-H.	50	1750	208/220/440/550	R-22	110	Shell & Tube	Shell & Tube
F60HC18G8	60	64⅝	117⅝	38¼	5460	Curtis	Semi-H.	60	1750	208/220/440/550	R-22	145	Shell & Tube	Shell & Tube
F75DC18G9	75	62½	133⅝	53¼	7410	Curtis	Open D	75	1750	208/220/440/550	R-22	170	Shell & Tube	Shell & Tube
F100DC20G7	100	64⅝	110¼	63⅝	8920	Curtis	Open D	100	1750	208/220/440/550	R-22	220	Shell & Tube	Shell & Tube
F125DC18Y11	125	62⅜	157⅛	63⅝	9690	Curtis	Open D	125	1750	208/220/440/550	R-22	265	Shell & Tube	Shell & Tube
7C8G6	7½	48¼	91⅝	34½	1550	Curtis	Open B	7½	1750	208/220/440/550	R-12	40	Shell & Tube	Shell & Tube
F7C8G6	7½	48¼	91⅝	34½	1550	Curtis	Open B	7½	1750	208/220/440/550	R-22	35	Shell & Tube	Shell & Tube
10C8G6	10	48¼	91⅝	34½	1770	Curtis	Open B	10	1750	208/220/440/550	R-12	45	Shell & Tube	Shell & Tube
F10C8G6	10	48¼	91⅝	34½	1750	Curtis	Open B	10	1750	208/220/440/550	R-22	40	Shell & Tube	Shell & Tube
15C8G6	15	50¼	91⅞	35	2180	Curtis	Open B	15	1750	208/220/440/550	R-12	55	Shell & Tube	Shell & Tube
F15C8G6	15	50¼	91⅞	35	2160	Curtis	Open B	15	1750	208/220/440/550	R-22	50	Shell & Tube	Shell & Tube
20C8G6	20	60⅝	91⅞	36	2910	Curtis	Open B	20	1750	208/220

Compressor Data

(Continued from Page 59, Col. 2)

Model No.	Type	Hp.	Cooling Method	Cylinders	Bore	Stroke	R.P.M.
CURTIS							
45-6L	Semi-H.	40	Suction	4	3 1/4	2 3/4	1750
63-6L	Semi-H.	50	Suction	5	3 1/4	2 3/4	1750
65-6L	Semi-H.	60	Suction	6	3 1/4	2 3/4	1750
SCHNACKE							
T	Open	....	....	2	3 3/32	3 3/4	600-1750
F	Open	....	....	4	3 3/32	3 3/4	800-1750
E	Open	....	....	8	3 3/32	3 3/4	800-1750
WESTINGHOUSE							
CLS-31	Semi-H.	3	Gas	2	2	1 1/2	1750
CLS-41	Semi-H.	4	Gas	2	2 1/8	1 1/2	1750
CLS-51	Semi-H.	5	Gas	2	2 3/8	2 1/8	1750
CLS-61	Semi-H.	....	Gas	2	2 3/8	1 1/2	1750
CLS-81	Semi-H.	7.5	Gas	2	2 3/8	2 1/8	1750
D-58	Hermetic	¾	Suction	1	1 3/8	1 1/64	1720
D-75	Hermetic	1	Suction	1	1 9/16	1 1/64	1720
C-150	Hermetic	1½	Suction	2	1 9/16	1 1/64	1750
WORTHINGTON							
2JF2-3	Semi-H.	3	Suction	2	1 15/16	1 7/16	1750
2JF3-5	Semi-H.	5	Suction	3	1 15/16	1 7/16	1750
2JF5-7.5	Semi-H.	7.5	Suction	5	1 15/16	1 7/16	1750
23JF5-10	Semi-H.	10	Suction	5	1 15/16	1 7/16	1750
470 C	Semi-H.	5	Suction	3	1 15/16	1 7/16	1750
512 C	Semi-H.	7½	Suction	5	1 15/16	1 7/16	1750
515 C	Semi-H.	7½	Suction	5	1 15/16	1 7/16	1750
537 C	Semi-H.	5	Suction	3	1 15/16	1 7/16	1750

(Continued on Page 61, Col. 4)



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TEMPRITE

OIL SEPARATOR

1. It is absolutely essential to completely lubricate all moving parts of the refrigeration compressor. Why risk the possibility of a burned out compressor due to loss of oil?

2. Constant clean oil lengthens compressor life. The oil return valve in a Temprite Oil Separator is located above the sludge reservoir . . . allowing the automatic return of clean oil to the compressor.

3. A sludge reservoir is provided in all Temprite Oil Separators to trap carbon, sludge and foreign substances, preventing their continued flow through the refrigerating system.

4. Keeping excess oil out of the condenser, liquid receiver, expansion valve and evaporator will increase refrigeration efficiency.

Temprite Oil Separator muffles sound.
Capacities from ⅛ h.p. to 225 h.p.

ASME

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Send me Oil Separator brochure No. T-447

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City_____ Zone____ State_____

TEMPRITE
The Quality Line

Liquid Chillers

Model No.	Capacity (Nom. Tons)	Overall Dimensions (In.) Height	Length	Depth	Operating Weight (Lbs)	Compressor Make	Compressor Type	Motor Hp	Motor RPM	Motor Volts	Refrigerant No.	Refrigerant Charge	Cooler Type	Condenser Type
Dialaire, Pentatemp, Fluid-Pak—Dialatemp, Inc., 706 Chestnut, St. Louis 1, Mo.														
DFP-15	15	85	80	32	2500	Dialaire	Semi-H.	15	1750	440/380/220	R-22	45	DX Internal Fin	Cleanable S&T
DFP-20	20	82	92	24	3125	Dialaire	Semi-H.	20	1750	440/380/220	R-22	55	DX Internal Fin	Cleanable S&T
DFP-25	25	82	128	24	3475	Dialaire	Semi-H.	25	1750	440/380/220	R-22	66	DX External Fin	Cleanable S&T
DFP-30	30	71	116	28	4130	Dialaire	Semi-H.	30	1750	440/380/220	R-22	82	DX Internal Fin	Cleanable S&T
DFP-40	40	72	116	28	4600	Dialaire	Semi-H.	40	1750	440/380/220	R-22	90	DX Internal Fin	Cleanable S&T
DFP-50	50	75	117	32	6300	Dialaire	Semi-H.	50	1750	440/380/220	R-22	112	DX Internal Fin	Cleanable S&T
DFP-60	60	75	129	32	6550	Dialaire	Semi-H.	60	1750	440/380/220	R-22	120	DX-Internal Fin	Cleanable S&T
DFP-75	75	81	129	32	8200	Dialaire	Semi-H.	75	1750	440/380/220	R-22	154	DX Internal Fin	Cleanable S&T
DFP-100	100	86	135	36	10,875	Dialaire	Semi-H.	100	1750	440/380/220	R-22	192	DX Internal Fin	Cleanable S&T
DFP-125	125	92	135	36	11,225	Dialaire	Semi-H.	125	1750	440/380/220	R-22	218	DX Internal Fin	Cleanable S&T
DFP-150	150	76	174	48	12,350	Dialaire	Semi-H.	150	1750	440/380/220	R-22	296	DX Internal Fin	Cleanable S&T
Flow-Cold (RF, RG), Flow-Therm (HE, HHD, DE, DD)—Acme Industries, Inc., Jackson, Mich.														
RF-3	2.75	38½	52⅞	25½	890	Carrier	Semi-H.	3	1750	220/230/440	R-22	9	Shell & Tube	Shell & Coil
RF-5	4.45	38⅝	72	25½	1045	Carrier	Semi-H.	5	1750	220/230/440	R-22	10	Shell & Tube	Shell & Coil
RF-8	6.91	40¼	75	27¼	1250	Carrier	Semi-H.	7½	1750	220/440	R-22	15	Shell & Tube	Shell & Coil
RF-10	9.13	46	75	27⅝	1505	Carrier	Semi-H.	10	1750	220/440	R-22	17	Shell & Tube	Shell & Coil
RF-15	13.9	47⅝	99½	29	2170	Carrier	Semi-H.	(2)7½	1750	220/440	R-22	30	Shell & Tube	Shell & Coil
RF-20	18.2	50½	99½	29	2675	Carrier	Semi-H.	(2)10	1750	220/440	R-22	34	Shell & Tube	Shell & Coil
RF-25	22.9	50	113⅝	29	2790	Carrier	Semi-H.	10/15	1750	220/440	R-22	43	Shell & Tube	Shell & Tube
RF-30	27.9	50	125⅞	29	2905	Carrier	Semi-H.	(2)15	1750	220/440	R-22	52	Shell & Tube	Shell & Tube
RF-45	40.5	52⅞	106⅜	40½	4340	Carrier	Semi-H.	(3)15	1750	220/440	R-22	78	Shell & Tube	Shell & Tube
RG-3	2.75	35½	46	24½	610	Carrier	Semi-H.	3	1750	220/440	R-22	5	Shell & Tube	Shell & Tube
RG-5	4.45	35½	46	24½	745	Carrier	Semi-H.	5	1750	220/440	R-22	8	Sheel & Tube	Shell & Tube
RG-8	6.91	36½	46	27½	795	Carrier	Semi-H.	7½	1750	220/440	R-22	13	Shell & Tube	Shell & Tube
RG-10	9.13	36½	46	30½	925	Carrier	Semi-H.	10	1750	220/440	R-22	15	Shell & Tube	Shell & Tube
RG-15S	13.9	36¼	64	30½	1390	Carrier	Semi-H.	15	1750	220/440	R-22	24	Shell & Tube	Shell & Tube
RG-15A	13.9	44⅝	73½	30½	1495	Carrier	Semi-H.	(2)7½	1750	220/440	R-22	26	Shell & Tube	Shell & Tube
RG-20A	18.2	44⅝	73½	30⅞	1715	Carrier	Semi-H.	(2)10	1750	220/440	R-22	30	Shell & Tube	Shell & Tube
RG-25A	22.9	46¼	74	30½	1910	Carrier	Semi-H.	10/15	1750	220/440	R-22	39	Shell & Tube	Shell & Tube
RG-30A	27.9	46¼	74½	30½	2065	Carrier	Semi-H.	(2)15	1750	220/440	R-22	48	Shell & Tube	Shell & Tube
HE-20	19.1	53½	76⅝	25	1620	Carrier	Semi-H.	20	1750	220/440	R-22	30	Shell & Tube	Shell & Tube
HE-25	23.6	53¼	84¼	25	1800	Carrier	Semi-H.	25	1750	220/440	R-22	38	Shell & Tube	Shell & Tube
HE-30	27.9	59¾	84¾	28½	2390	Carrier	Semi-H.	30	1750	220/440	R-22	45	Shell & Tube	Shell & Tube
HE-40	37.4	59¾	84½	28⅝	2650	Carrier	Semi-H.	40	1750	220/440	R-22	60	Shell & Tube	Shell & Tube
HE-50	47.4	61⅞	86¼	32	3150	Carrier	Semi-H.	50	1750	220/440	R-22	75	Shell & Tube	Shell & Tube
HE-60	56.5	61⅞	86½	34⅜	3490	Carrier	Semi-H.	60	1750	220/440	R-22	90	Shell & Tube	Shell & Tube
HE-100	95.5	66¼	89⅜	42	4350	Carrier	Semi-H.	100	1750	220/440	R-22	150	Shell & Tube	Shell & Tube
HE-125	114.6	66¼	107½	42	5350	Carrier	Semi-H.	125	1750	220/440	R-22	188	Shell & Tube	Shell & Tube
HHD-60	57.5	87⅜	113⅝	35	5770	Carrier	Semi-H.	(2)30	1750	220/440	R-22	126	Shell & Tube	Shell & Tube
HHD-80	73.6	85½	113½	35	7040	Carrier	Semi-H.	(2)40	1750	220/440	R-22	168	Shell & Tube	Shell & Tube
HHD-100	94.6	89¾	140⅝	35	8300	Carrier	Semi-H.	(2)50	1750	220/440	R-22	210	Shell & Tube	Shell & Tube
HHD-120	111.1	89¾	166⅝	35	9350	Carrier	Semi-H.	(2)60	1750	220/440	R-22	252	Shell & Tube	Shell & Tube
HHD-160	153.1	100	158	41	11560	Carrier	Semi-H.	60/100	1750	220/440	R-22	336	Shell & Tube	Shell & Tube
HHD-200	187.8	100	172½	41	12900	Carrier	Semi-H.	(2)100	1750	220/440	R-22	420	Shell & Tube	Shell & Tube
HHD-250	225.5	104	160⅞	41	14400	Carrier	Semi-H.	(2)125	1750	220/440	R-22	525	Shell & Tube	Shell & Tube
DE-20	19.4	44⅝	79⅞	23	1685	Carrier	Open D	20	1750	220/440	R-22	30	Shell & Tube	Shell & Tube
DE-25	24.0	45¼	85⅛	25	1900	Carrier	Open D	25	1750	220/440	R-22	38	Shell & Tube	Shell & Tube
DE-30	28.9	51⅝	86¼	28⅝	2520	Carrier	Open D	30	1750	220/440	R-22	45	Shell & Tube	Shell & Tube
DE-40	39.2	55	87⅝	28⅝	2850	Carrier	Open D	40	1750	220/440	R-22	60	Shell & Tube	Shell & Tube
DE-50	47.8	58⅜	87½	32	3430	Carrier	Open D	50	1750	220/440	R-22	75	Shell & Tube	Shell & Tube
DE-60	57.7	61¼	87⅞	34½	3890	Carrier	Open D	60	1750	220/440	R-22	90	Shell & Tube	Shell & Tube
DE-75	74.6	64⅝	92⅛	38⅝	4570	Carrier	Open D	75	1750	220/440	R-22	112	Shell & Tube	Shell & Tube
DE-100	95.8	69¾	92⅛	42⅝	5420	Carrier	Open D	100	1750	220/440	R-22	150	Shell & Tube	Shell & Tube
DE-125	117.2	69¾	110½	42⅝	6500	Carrier	Open D	125	1750	220/440	R-22	188	Shell & Tube	Shell & Tube
DD-20	19.9	56⅛	129½	27⅝	3000	Carrier	Open D	20	1750	220/440	R-22	42	Shell & Tube	Shell & Tube
DD-25	24.5	59⅝	117⅞	29⅝	3200	Carrier	Open D	25	1750	220/440	R-22	54	Shell & Tube	Shell & Tube
DD-30	28.9	65⅜	130⅝	32⅝	3800	Carrier	Open D	30	1750	220/440	R-22	64	Shell & Tube	Shell & Tube
DD-40	38.5	67⅝	130	34⅝	4500	Carrier	Open D	40	1750	220/440	R-22	85	Shell & Tube	Shell & Tube
DD-50	48.4	74⅛	132½	38⅞	5300	Carrier	Open D	50	1750	220/440	R-22	107	Shell & Tube	Shell & Tube
DD-60	58.2	72⅞	130⅝	41	6000	Carrier	Open D	60	1750	220/440	R-22	128	Shell & Tube	Shell & Tube
DD-75	76.4	74	134½	41¼	6900	Carrier	Open D	75	1750	220/440	R-22	168	Shell & Tube	Shell & Tube
DD-100	96.0	80⅞	134½	47¼	8300	Carrier	Open D	100	1750	220/440	R-22	212	Shell & Tube	Shell & Tube
DD-125	115.6	85	123	53½	9600	Carrier	Open D	125	1750	220/440	R-22	264	Shell & Tube	Shell & Tube
Hydro-Flo—Bell & Gossett Co., 8200 N. Austin, Morton Grove, Ill.														
PLC-7½	7.5	41½	69	32	1075	B & G	Open D	7½	1160	208/220/440	R-12	15	Direct-X	Shell & Coil
PLC-10	10.0	41½	69	32	1150	B & G	Open D	10	1750	208/220/440	R-12	20	Direct-X	Shell & Coil
PLC-15	14.6	41½	82	32	1315	B & G	Open D	15	1750	208/220/440	R-22	18	Direct-X	Shell & Tube
PLC-20	17.5	67	94	28½	2860	B & G	Open D	20	1160	208/220/440	R-12	34	Direct-X	Shell & Tube
PLC-25	24.0	67	94	28½	3030	B & G	Open D	25	1750	208/220/440	R-12	39	Direct-X	Shell & Tube
PLC-30	30.1	80	94	28½	3540	B & G	Open D	30	1750	208/220/440	R-12	47	Direct-X	Shell & Tube
PLC-40	37.8	76	95	30⅞	3935	B & G	Open D	40	1750	208/220/440	R-22	52	Direct-X	Shell & Tube
PLC-50	47.4	83	95	30⅞	4440	B & G	Open D	50	1750	208/220/440	R-22	65	Direct-X	Shell & Tube
PLC-60	57.3	80	102	32⅞	5130	B & G	Open D	60	1750	208/220/440	R-22	78	Direct-X	Shell & Tube
PLC-75	73.9	94	102	32⅞	5880	B & G	Open D	75	1750	208/220/440	R-22	98	Direct-X	Shell & Tube
PLC-60DU	61.2	80	110	65	7080	B & G	Open D	(2)30	1750	208/220/440	R-12	90	Direct-X	Shell & Tube
PLC-80DU	77.2	83	110	64	7890	B & G	Open D	(2)40	1750	208/220/440	R-22	96	Direct-X	Shell & Tube
PLC-100DU	94.8	85	110	67	8645	B & G	Open D	(2)50	1750	208/220/440	R-22	120	Direct-X	Shell & Tube
PLC-120DU	114.2	85	116	69	9680	B & G	Open D	(2)60	1750	208/220/440	R-22	144	Direct-X	Shell & Tube
PLC-135DU	135.2	88	116	71	10,630	B & G	Open D	60/75	1750	208/220/440	R-22	162	Direct-X	Shell & Tube
PLC-150DU	150.4	88	116	71	11,120	B & G	Open D	(2)75	1750	208/220/440	R-22	180	Direct-X	Shell & Tube
Kennard/Nelson—American Air Filter Co., Inc., 215 Central Ave., Louisville 8, Ky.														
D 20D	20.5	58	108	32½	2400	Carrier	Open D	20	1750	*	R-22	45	Shell & Coil	Shell & Tube
D 20H	20.5	58	108	32½	2400	Carrier	Herm.	20	1750	*	R-22	45	Shell & Coil	Shell & Tube
D 25D	24.2	58	108	32½	2500	Carrier	Open D	25	1750	*	R-22	55	Shell & Coil	Shell & Tube
D 25H	24.2	58	108	32½	2400	Carrier	Herm.	25	1750	*	R-22	55	Shell & Coil	Shell & Tube
D 30D	28.8	63½	115½	35½	3300	Carrier	Open D	30	1750	*	R-22	70	Shell & Coil	Shell & Tube
D-30H	28.8	63½	115½	35½	3200	Carrier	Herm.	30	1750	*	R-22	70	Shell & Coil	Shell & Tube
D-40D	37.9	63½	115½	37½	3700	Carrier	Open D	40	1750	*	R-22	80	Shell & Coil	Shell & Tube
D 40H	37.9	63½	115½	37½	3700	Carrier	Herm.	40	1750	*	R-22	80	Shell & Coil	Shell & Tube
D 50D	47.1	70½	107	44½	4700	Carrier	Open D	50	1750	*	R-22	100	Shell & Coil	Shell & Tube
D 50H	47.1	70½	107	44½	4800	Carrier	Herm.	50	1750	*	R-22	100	Shell & Coil	Shell & Tube
D 60D	55.7	70½	107	44½	5200	Carrier	Open D	60	1750	*	R-22	110	Shell & Coil	Shell & Tube
D 60H	55.7	70½	107	44½	5100	Carrier	Herm.	60	1750	*	R-22	110	Shell & Coil	Shell & Tube
D 75D	76.3	78	145	45	6500	Carrier	Open D	75	1750	*	R-22	170	Shell & Coil	Shell & Tube
D 100D	102	80½	145	47½	7900	Carrier	Open D	100	1750	*	R-22	195	Shell & Coil	Shell & Tube
D 125D	110	80½	145	47½	8500	Carrier	Open D	125	1750	*	R-22	230	Shell & Coil	Shell & Tube
D 150D	147	81	169	48½	10800	Carrier	Open D	150	1750	*	R-22	380	Shell & Coil	Shell & Tube

*Open Unit Voltages Available: 208, 220, 440, 550 and other standard voltages. Hermetic Units available for 208, 220, 440, 550 and 380 volts.

Koldwave—Heat Exchangers, Inc., 1749 W. Carroll Ave., Chicago 12, Ill.														
K11D	¾	31	19	18	170	Tecumseh	Herm.	....	....	....	....	....	....	....
K13D	1	31	19	18	170	Tecumseh	Herm.	....	....	....	....	....	....	....
K25D	2	40	21½	21½	230	Tecumseh	Herm.	....	....	....	....	....	....	....
K33D	3	40	21½	21½	230	Tecumseh	Herm.	....	....	....	....	....	....	....
Liquid Ice—Cool-Ette, Inc., 7535 W. Eight Mile Rd., Detroit 21, Mich.														
WC2W	2	37	23½	17⅝	....	Tecumseh	Herm.	2	1750	230	R-22	2# 11	Tube-In-Tube	Tube-In-Tube
WC3W	3	37	23½	17⅝	....	Tecumseh	Herm.	3	1750	230	R-22	2# 11	Tube-In-Tube	Tube-In-Tube
WC5W	5	40	32	20	....	Tecumseh	Herm.	5	1750	230	R-22	5# 4	Tube-In-Tube	Tube-In-Tube
WC2A	2	37	23½	17⅝	....	Tecumseh	Herm.	2	1750	230	R-22	2# 11	Tube-In-Tube	Finned Tube
WC3A	3	37	23½	17⅝	....	Tecumseh	Herm.	3	1750	230	R-22	2# 11	Tube-In-Tube	Finned Tube
WC5A	5	40	32	20	....	Tecumseh	Herm.	5	1750	230	R-22	5# 4	Tube-In-Tube	Finned Tube
Mono-Aqua—A. Brown Products Corp., 1090 Springfield Rd., Union, N. J.														
BWC-2W	2	27⅞	17¾	23¼	....	Tecumseh	Herm.	2	....	220	R-22	....	Tube-In-Tube	Tube-In-Tube
BWC-3W	3	27⅞	17¾	23¼	....	Tecumseh	Herm.	3	....	220	R-22	....	Tube-In-Tube	Tube-In-Tube
BWC-5W	5	34⅝	20	33	....	Tecumseh	Herm.	5	....	220	R-22	....	Tube-In-Tube	Tube-In-Tube
BWC-10W	10	45	47	33	....	Tecumseh	Herm.	(2)5	....	220	R-22	....	Tube-In-Tube	Tube-In-Tube
BWC-15W	15	45	74	33	....	Tecumseh	Herm.	(3)5	....	220	R-22	....	Tube-In-Tube	Tube-In-Tube
BWC-20W	20	47	101	33	....	Tecumseh	Herm.	(4)5	....	220	R-22	....	Tube-In-Tube	Tube-In-Tube
BWC-25W	25	47	128	33	....	Tecumseh	Herm.	(5)5	....	220	R-22	....	Tube-In-Tube	Tube-In-Tube
BWC-2R	2	27⅞	17¾	23¼	....	Tecumseh	Herm.	2	....	220	R-22	....	Tube-In-Tube	Fin-Tube
BWC-3R	3	27⅞	17¾	23¼	....	Tecumseh	Herm.	3	....	220	R-22	....	Tube-In-Tube	Fin-Tube
BWC-5R	5	34⅝	20	33	....	Tecumseh	Herm.	5	....	220	R-22	....	Tube-In-Tube	Fin-Tube
Ready-Power—The Ready-Power Co., 11231 Freud Ave., Detroit 14, Mich.														
CCHP-25	25	72	132	70	3540	Chrysler	Open D	65	2400	....	R-22	Holding	Direct-X	Shell & Tube
CCHP-30	30	72	132	70	3930	Chrysler	Open D	65	2400	....	R-22	Holding	Direct-X	Shell & Tube
CCHP-40	40	72	168	70	4415	Chrysler	Open D	80	2400	....	R-22	Holding	Direct-X	Shell & Tube
CCHP-45	45	72	132	70	4740	Chrysler	Open D	80	2400	....	R-22	Holding	Direct-X	Shell & Tube
CCHP-50	50	72	144	70	4875	Chrysler	Open D	112	2200	....	R-22	Holding	Direct-X	Shell & Tube
CCHP-55	55	81	156	70	5540	Chrysler	Open D	112	2200	....	R-22	Holding	Direct-X	Shell & Tube
CCHP-60	60	81	168	70	5720	Chrysler	Open D	112	2200	....	R-22	Holding	Direct-X	Shell & Tube
CCHP-65	65	81	144	70	5750	Chrysler	Open D	112	2200	....	R-22	Holding	Direct-X	Shell & Tube
SCHP-25	25	76	116	45	3600	Carrier	Open D	56	2000	....	R-22	Holding	Direct-X	Shell & Tube
SCHP-35	35	77	144	70	4295	Carrier	Open D	66	1900	....	R-22	Holding	Direct-X	Shell & Tube
SCHP-40	40	77	168	70	4390	Carrier	Open D	66	1900	....	R-22	Holding	Direct-X	Shell & Tube
SCHP-50	50	87	144	70	5600	Carrier	Open D	101	1900	....	R-22	Holding	Direct-X	Shell & Tube
SCHP-55	55	87	156	70	5885	Carrier	Open D	101	1900	....	R-22	Holding	Direct-X	Shell & Tube
SCHP-60	60	87	156	70	6160	Carrier	Open D	101	1900	....	R-22	Holding	Direct-X	Shell & Tube
SCHP-65	65	78	144	74	6690	Carrier	Open D	157	1900	....	R-22	Holding	Direct-X	Shell & Tube
SCHP-75	75	78	156	74	6790	Carrier	Open D	157	1900	....	R-22	Holding	Direct-X	Shell & Tube
SCHP-80	80	78	156	76	7650	Carrier	Open D	157	1900	....	R-22	Holding	Direct-X	Shell & Tube
SCH-90	90	78	144	76	7750	Carrier	Open D	157	1900	....	R-22	Holding	Direct-X	Shell & Tube
SCH-100	100	78	192	76	8585	Carrier	Open D	157	1900	....	R-22	Holding	Direct-X	Shell & Tube
SCHP-110	110	91	192	72	9535	Carrier	Open D	221	1900	....	R-22	Holding	Direct-X	Shell & Tube
SCHP-115	115	91	192	72	9885	Carrier	Open D	221	1900	....	R-22	Holding	Direct-X	Shell & Tube
SCHP-120	120	91	156	76	10,280	Carrier	Open D	221	1900	....	R-22	Holding	Direct-X	Shell & Tube
SCHP-125	125	91	192	76	11,200	Carrier	Open D	221	1900	....	R-22	Holding	Direct-X	Shell & Tube
SCHP-150	150	78	144	124	13,820	Carrier	Open D	157	1900	....	R-22	Holding	Direct-X	Shell & Tube
SCH-175	175	78	180	124	15,250	Carrier	Open D	157	1900	....	R-22	Holding	Direct-X	Shell & Tube
SCH-200	200	78	156	128	16,100	Carrier	Open D	157	1900	....	R-22	Holding	Direct-X	Shell & Tube
SCHP-230	230	91	144	120	17,860	Carrier	Open D	221	1900	....	R-22	Holding	Direct-X	Shell & Tube
SCHP-240	240	91	204	120	20,020	Carrier	Open D	231	1900	....	R-22	Holding	Direct-X	Shell & Tube
SCH-275	275	78	192	172	22,835	Carrier	Open D	157	1900	....	R-22	Holding	Direct-X	Shell & Tube
SCH-300	300	78	228	172	24,118	Carrier	Open D	157	1900	....	R-22	Holding	Direct-X	Shell & Tube
SCHP-350	350	91	216	160	27,000	Carrier	Open D	221	1900	....	R-22	Holding	Direct-X	Shell & Tube
SCHP-375	375	91	216	170	31,760	Carrier	Open D	221	1900	....	R-22	Holding	Direct-X	Shell & Tube
TCHP-25	25	76	116	45	3650	Trane	Open D	58	2100	....	R-22	Holding	Direct-X	Shell & Tube
TCHP-30	30	76	116	45	3960	Trane	Open D	58	2100	....	R-22	Holding	Direct-X	Shell & Tube
TCHP-35	35	77	156	70	4265	Trane	Open D	58	2100	....	R-22	Holding	Direct-X	Shell & Tube
TCHP-40	40	77	156	70	4315	Trane	Open D	72	2100	....	R-22	Holding	Direct-X	Shell & Tube
TCHP-45	45	77	156	70	4810	Trane	Open D	72	2100	....	R-22	Holding	Direct-X	Shell & Tube
TCHP-50	50	87	144	70	5380	Trane	Open D	101	1900	....	R-22	Holding	Direct-X	Shell & Tube
TCHP-55	55	87	156	70	5656	Trane	Open D	101	1900	....	R-22	Holding	Direct-X	Shell & Tube
TCHP-60	60	87	168	70	5845	Trane	Open D	101	1900	....	R-22	Holding	Direct-X	Shell & Tube
TCHP-65	65	86	144	74	6340	Trane	Open D	157	1900	....	R-22	Holding	Direct-X	Shell & Tube
TCHP-70	70	86	156	74	6490	Trane	Open D	157	1900	....	R-22	Holding	Direct-X	Shell & Tube
TCHP-75	75	86	198	74	7060	Trane	Open D	157	1900	....	R-22	Holding	Direct-X	Shell & Tube
TCH-75	75	86	156	74	6570	Trane	Open D	157	1900	....	R-22	Holding	Direct-X	Shell & Tube
TCH-80	80	86	132	76	7015	Trane	Open D	157	1900	....	R-22	Holding	Direct-X	Shell & Tube
TCH-90	90	86	144	76	7220	Trane	Open D	157	1900	....	R-22	Holding	Direct-X	Shell & Tube
TCH-100	100	86	192	76	8060	Trane	Open D	157	1900	....	R-22	Holding	Direct-X	Shell & Tube
TCHP-150	150	86	192	124	13,760	Trane	Open D	157	1900	....	R-22	Holding	Direct-X	Shell & Tube
TCH-150	150	86	144	124	12,770	Trane	Open D	157	1900	....	R-22

Liquid Chillers

Model No.	Capacity (Nom. Tons)	Overall Dimensions (In.) Height	Length	Depth	Operating Weight (Lbs)	Compressor Make	Compressor Type	Motor Hp	Motor RPM	Motor Volts	Refrigerant No.	Refrigerant Charge	Cooler Type	Condenser Type
Precision—Precision Heat Exchanger Co., Inc., 15 Harold St., Westwood, N. J.														
WHD-15	15	44	72	30	2412	Worth.	Herm.	20	1800	208/220/440	R-22	35	Direct-X	Shell & Tube
WHD-20	20	44	72	30	2643	Worth.	Herm.	25	1800	208/220/440	R-22	46	Direct-X	Shell & Tube
WHD-25	25	44	84	30	2734	Worth.	Herm.	30	1800	208/220/440	R-22	48	Direct-X	Shell & Tube
WHD-30	30	44	84	30	2864	Worth.	Herm.	40	1800	208/220/440	R-22	64	Direct-X	Shell & Tube
WDD-15	15	44	72	30	2432	Worth.	Open D	15	1800	208/220/440	R-22	33	Direct-X	Shell & Tube
WDD-20	20	44	72	30	2643	Worth.	Open D	20	1800	208/220/440	R-22	44	Direct-X	Shell & Tube
WDD-25	25	44	84	30	2734	Worth.	Open D	25	1800	208/220/440	R-22	46	Direct-X	Shell & Tube
WDD-30	30	44	84	30	2982	Worth.	Open D	30	1800	208/220/440	R-22	62	Direct-X	Shell & Tube
WDD-35	35	48	96	32	3515	Worth.	Open D	40	1800	208/220/440	R-22	82	Direct-X	Shell & Tube
WDD-45	45	48	96	32	3673	Worth.	Open D	50	1800	208/220*/440	R-22	91	Direct-X	Shell & Tube
WDD-50	50	48	96	32	3841	Worth.	Open D	50	1800	208/220/440	R-22	102	Direct-X	Shell & Tube
WDD-60	60	48	136	32	4255	Worth.	Open D	60	1800	208/220/440	R-22	104	Direct-X	Shell & Tube
WDD-75	75	48	106	32	4706	Worth.	Open D	75	1800	208/220/440	R-22	139	Direct-X	Shell & Tube
PWC-100	95	68	108	52	9347	Worth.	Open B	100	1800	208/220/440	R-22	193	Direct-X	Shell & Tube
PWC-125	120	68	108	52	9619	Worth.	Open B	125	1800	208/220/440	R-22	227	Direct-X	Shell & Tube
PWC-150	150	70	120	54	10856	Worth.	Open B	150	1200	208/220/440	R-22	290	Direct-X	Shell & Tube
Thermatic—National Thermatic Corp., 939 W. 35th, P. O. Box 10699, Houston 18, Texas														
T-3CC	3	28	59	40	425	...	Open D	3	....	220	R-22	....	Direct-X	Finned Tube
T-4CC	4	28	59	40	440	...	Open D	4	....	220	R-22	....	Direct-X	Finned Tube
T-5CC	5	28	59	40	450	...	Open D	5	....	220	R-22	....	Direct-X	Finned Tube
T-7.5CC	7.5	38	102	46	850	...	Open D	7½	....	220	R-22	....	Direct-X	Finned Tube
T-10CC	10	38	102	46	950	...	Open D	10	....	220	R-22	....	Direct-X	Finned Tube
T-15CC	15	38	158	46	1400	...	Open D	(3)7½	....	220	R-22	....	Direct-X	Finned Tube
T-20CC	20	38	158	46	1600	...	Open D	(2)10	....	220	R-22	....	Direct-X	Finned Tube
Thermatrol—Schnacke, Inc., 1101 N. Governor St., Evansville 7, Ind.														
CCM-7.5	7.5	32	69	23	752	Copeland	Open D	7.5	1750	208/220	R-22	*	Direct-X	Shell & Tube
CCM-10	10	33	70	24	1021	Copeland	Open D	10	1750	208/220	R-22	*	Direct-X	Shell & Tube
CCM-15	15	34	70	26	1150	Copeland	Open D	15	1750	208/230/440	R-22	*	Direct-X	Shell & Tube
CCM-20	20	34	71	28	1380	Copeland	Open D	20	1750	208/230/440	R-22	*	Direct-X	Shell & Tube
CCM-25	25	37	83	30	1625	Copeland	Open D	25	1750	208/230/440	R-22	*	Direct-X	Shell & Tube
CCM-30	30	37	72	32	1870	Copeland	Open D	30	1750	208/230/440	R-22	*	Direct-X	Shell & Tube
CT-10	10	49	70	33	2200	Schnacke	Open B	10	1750	208/230/440	R-12	*	Direct-X	Shell & Tube
CTD-15	15	51	69	33	3470	Schnacke	Open D	15	1750	208/230/440	R-12	*	Direct-X	Shell & Tube
CF-20	20	53	71	33	3250	Schnacke	Open B	20	1750	208/230/440	R-12	*	Direct-X	Shell & Tube
CFD-20	20	53	71	33	3260	Schnacke	Open D	20	1750	208/230/440	R-12	*	Direct-X	Shell & Tube
CF-25	25	53	83	33	3700	Schnacke	Open B	25	1750	208/230/440	R-12	*	Direct-X	Shell & Tube
CFD-30	30	55	71	33	4100	Schnacke	Open D	30	1750	208/230/440	R-12	*	Direct-X	Shell & Tube
CE-40	40	55	83	42	5590	Schnacke	Open B	40	1750	208/230/440	R-12	*	Direct-X	Shell & Tube
CED-40	40	55	83	33	5760	Schnacke	Open D	40	1750	208/230/440	R-12	*	Direct-X	Shell & Tube
CE-50	50	56	78	42	5500	Schnacke	Open B	50	1750	208/230/440	R-12	*	Direct-X	Shell & Tube
CED-60	60	56	84	42	6370	Schnacke	Open D	60	1750	208/230/440	R-13	*	Direct-X	Shell & Tube
CTT-10	10	49	70	33	2900	Schnacke	Open B	10	1750	208/230/440	R-23	*	Direct-X	Shell & Tube
CTT-15	15	51	69	33	3200	Schnacke	Open B	15	1750	208/230/440	R-22	*	Direct-X	Shell & Tube
CFT-20	20	53	71	33	3600	Schnacke	Open B	20	1750	208/230/440	R-22	*	Direct-X	Shell & Tube
CFT-25	25	53	83	33	4100	Schnacke	Open B	25	1750	208/230/440	R-23	*	Direct-X	Shell & Tube
CFT-30	30	53	71	33	4400	Schnacke	Open B	30	1750	208/230/440	R-22	*	Direct-X	Shell & Tube
CFT-40	40	55	83	37	5000	Schnacke	Open B	40	1750	208/230/440	R-22	*	Direct-X	Shell & Tube
CET-50	50	56	78	42	6200	Schnacke	Open B	50	1750	208/230/440	R-22	*	Direct-X	Shell & Tube
CET-60	60	56	84	44	7400	Schnacke	Open B	60	1750	208/230/440	R-22	*	Direct-X	Shell & Tube
CET-75	75	58	74	47	8200	Schnacke	Open B	75	1750	208/230/440	R-22	*	Direct-X	Shell & Tube

*Operating charge. In addition to the standard line of chillers listed above, our catalog includes a specification line of chillers built to meet the actual specifications of the job providing the advantages of remote engineering to package unit construction.

Model No.	Capacity (Nom. Tons)	Overall Dimensions (In.) Height	Length	Depth	Operating Weight (Lbs)	Compressor Make	Compressor Type	Motor Hp	Motor RPM	Motor Volts	Refrigerant No.	Refrigerant Charge	Cooler Type	Condenser Type
Trane—The Trane Co., La Crosse, Wis.														
CG10B	9.7	62	94	27	2205	Trane	Herm.	7.8*	1750	208/220/440	R-12	20	Direct-X	Shell & Tube
CG15B	15.0	62	94	27	2205	Trane	Herm.	12.3*	1750	208/220/440	R-22	35	Direct-X	Shell & Tube
CG20B	19.9	62	94	27	2370	Trane	Herm.	16.4*	1750	208/220/440	R-22	38	Direct-X	Shell & Tube
CG25B	25.2	64	94	27	2575	Trane	Herm.	20.5*	1750	208/220/440	R-22	60	Direct-X	Shell & Tube
CG30B	30.2	62	134	27	2800	Trane	Herm.	24.5*	1750	208/220/440	R-22	70	Direct-X	Shell & Tube
CG40B	40.4	62	134	27	3170	Trane	Herm.	32.6*	1750	208/220/440	R-22	80	Direct-X	Shell & Tube
CG50B	49.5	78	134	34¾	4120	Trane	Herm.	41.2*	1750	208/220/440	R-22	100	Direct-X	Shell & Tube
CG60B	60.8	78	136	35¼	4890	Trane	Herm.	51.2*	1750	208/220/440	R-22	120	Direct-X	Shell & Tube
CG75B	75.3	80⅝	146	35¼	5320	Trane	Herm.	61.8*	1750	208/220/440	R-22	150	Direct-X	Shell & Tube
CG100B	98.2	81½	147½	37	6080	Trane	Herm.	82.5*	1750	208/220/440	R-22	180	Direct-X	Shell & Tube
CG125A	117.3	68¾	135	67⅜	11000	Trane	Herm.	125	1750	208/220/440	R-22	240	Direct-X	Shell & Tube
CG150A	144.8	69	146	80	12000	Trane	Herm.	150	1750	208/220/440	R-22	290	Direct-X	Shell & Tube

*KW Input.

Model No.	Capacity (Nom. Tons)	Overall Dimensions (In.) Height	Length	Depth	Operating Weight (Lbs)	Compressor Make	Compressor Type	Motor Hp	Motor RPM	Motor Volts	Refrigerant No.	Refrigerant Charge	Cooler Type	Condenser Type
Typhoon—Typhoon Heat Pump Div., Hupp Corp., P. O. Box 1123, Tampa 1, Fla.														
WC25H	2	33	24	24	370	Tecumseh	Herm.	2	1750	208/220/230	R-22	3‡3	Tube-In-Tube	Tube-In-Tube
WC55H	3	33	24	24	400	Tecumseh	Herm.	3	1750	208/220/230	R-22	3‡3	Tube-In-Tube	Tube-In-Tube
WC80H	5	43	28	28	680	Tecumseh	Herm.	5	1750	208/220/230	R-22	5‡5	Tube-In-Tube	Tube-In-Tube
WC120H	8	42	28	28	1050	Copeland	Semi-H.	7.5	1750	208/220/440	R-22	7‡3	Tube-In-Tube	Tube-In-Tube
WC150H	10	43	28	28	1200	Copeland	Semi-H.	10	1750	208/220/440	R-22	9‡3	Tube-In-Tube	Tube-In-Tube
WC225H	15	43	28	28	1350	Copeland	Semi-H.	20	1750	208/220/440	R-22	11‡3	Tube-In-Tube	Tube-In-Tube
WC300-2H	20	60	62	34	2030	Copeland	Semi-H.	(2)10	1750	208/220/440	R-22	19	Tube-In-Tube	Tube-In-Tube
WC375-2H	25	60	62	34	2225	Copeland	Semi-H.	20/10	1750	208/220/440	R-22	21	Tube-In-Tube	Tube-In-Tube
WC450-2H	30	60	62	34	2650	Copeland	Semi-H.	(2)20	1750	208/220/440	R-22	23	Tube-In-Tube	Tube-In-Tube
WC600-3H	40	56	84	41	3100	Copeland	Semi-H.	(2)20†	1750	208/220/440	R-22	32‡3	Tube-In-Tube	Tube-In-Tube
WC675-3H	45	56	84	41	3250	Copeland	Semi-H.	(3)20	1750	208/220/440	R-22	34‡3	Tube-In-Tube	Tube-In-Tube
WC750-4H	50	56	112	41	3900	Copeland	Semi-H.	(2)20‡	1750	208/220/440	R-22	42	Tube-In-Tube	Tube-In-Tube
WC900-4H	60	56	112	41	4300	Copeland	Semi-H.	(4)20	1750	208/220/440	R-22	46	Tube-In-Tube	Tube-In-Tube
WC1125-5H	75	56	140	41	4600	Copeland	Semi-H.	(5)20	1750	208/220/440	R-22	57‡3	Tube-In-Tube	Tube-In-Tube
AWC3	3	36*	44	30	570	Tecumseh	Herm.	3	1750	208/220/230	R-22	6‡3	Tube-In-Tube	Finned Tube
AWC5	5	36½*	56	34	790	Tecumseh	Herm.	5	1750	208/220/230	R-22	13	Tube-In-Tube	Finned Tube
AWC8	8	33*	56	34	990	Copeland	Semi-H.	7.5	1750	208/220/440	R-22	14	Tube-In-Tube	Finned Tube
AWC10	10	33*	80	34	1475	Copeland	Semi-H.	10	1750	208/220/440	R-22	22	Tube-In-Tube	Finned Tube
AWC16	16	35*	97	48	1950	Copeland	Semi-H.	20	1750	208/220/440	R-22	34	Tube-In-Tube	Finned Tube
AWC20	20	45*	108	48	2900	Copeland	Semi-H.	(2)20	1750	208/220/440	R-22	44	Tube-In-Tube	Finned Tube
AWC24	24	35*	122	48	3680	Copeland	Semi-H.	30	1750	208/220/440	R-22	50	Tube-In-Tube	Finned Tube
AWC26	26	46*	122	62	3650	Copeland	Semi-H.	20/10	1750	208/220/440	R-22	58	Tube-In-Tube	Finned Tube
AWC30	30	46*	122	62	3850	Copeland	Semi-H.	(2)20	1750	208/220/440	R-22	68	Tube-In-Tube	Finned Tube

*Outdoor Unit Dimensions. †Plus one 10 hp unit. ‡Plus two 10 units.

Model No.	Capacity (Nom. Tons)	Overall Dimensions (In.) Height	Length	Depth	Operating Weight (Lbs)	Compressor Make	Compressor Type	Motor Hp	Motor RPM	Motor Volts	Refrigerant No.	Refrigerant Charge	Cooler Type	Condenser Type
Uni-Chiller—The Vilter Mfg. Co., 2217 South First St., Milwaukee 7, Wis.														
UF-2	26	61½	125	44	4300	Vilter	Open B	30	1750	220	R-22	Holding	Flooded	Shell & Tube
UF-4	52	72	125	44	5560	Vilter	Open B	50	1750	220	R-22	Holding	Flooded	Shell & Tube
UF-6	78	74	128	50	6400	Vilter	Open B	75	1750	220	R-22	Holding	Flooded	Shell & Tube
UF-8	104	78	128	52	8175	Vilter	Open B	100	1750	220	R-22	Holding	Flooded	Shell & Tube
UF-12	128	82	128	53	10,670	Vilter	Open D	125	900	220	R-22	Holding	Flooded	Shell & Tube
UID-4	52	75	134	46	6750	Vilter	Open B	50	1750	220	R-22	Holding	Direct-X	Shell & Tube
UID-6	78	78	134	47	8200	Vilter	Open B	75	1750	220	R-22	Holding	Direct-X	Shell & Tube
UID-8	104	82	138	50	10,135	Vilter	Open B	100	1750	220	R-22	Holding	Direct-X	Shell & Tube
usAIRco—U. S. Air Conditioning Corp., P.O. Box 360, Delaware, Ohio														
ICW-10	10	45	69	27	1450	...	Semi-H.	10	1750	208/220/440	R-22	30	Direct-X	Shell & Tube
ICW-15	15	54	94	29	2100	...	Semi-H.	15	1750	208/220/440	R-22	45	Direct-X	Shell & Tube
ICW-20	18.9	60	134	32	3100	...	Semi-H.	20	1750	208/220/440	R-22	60	Direct-X	Shell & Tube
ICW-25	23.6	63	123	32	3400	...	Semi-H.	25	1750	208/220/440	R-22	75	Direct-X	Shell & Tube
ICW-30	30.5	65	135	33	3800	...	Semi-H.	30	1750	208/220/440	R-22	90	Direct-X	Shell & Tube
ICW-40	40.5	71	138	40	5000	...	Semi-H.	40	1750	208/220/440	R-22	120	Direct-X	Shell & Tube
ICW-50	50.0	71	162	40	5500	...	Semi-H.	50	1750	208/220/440	R-22	150	Direct-X	Shell & Tube
ICW-60	58.1	71	127	42	6000	...	Semi-H.	60	1750	208/220/440	R-22	180	Direct-X	Shell & Tube
ICW-75	74.3	84	142	54	8700	...	Semi-H.	75	1750	208/220/440	R-22	225	Direct-X	Shell & Tube
ICW-100	100.5	85	192	54	10,000	...	Semi-H.	(2)50	1750	208/220/440	R-22	300	Direct-X	Shell & Tube
ICW-120	123.0	89	159	54	10,900	...	Semi-H.	(2)60	1750	208/220/440	R-22	350	Direct-X	Shell & Tube
ICW-150	148.0	100	187	56	14,050	...	Semi-H.	(2)75	1750	208/220/440	R-22	440	Direct-X	Shell & Tube
ICA-10	10.0	61¼	96	38	3000	...	Semi-H.	10	1750	208/220/440	R-22	35	Direct-X	Evaporative*
ICA-15	13.9	74	114	42	4330	...	Semi-H.	15	1750	208/220/440	R-22	45	Direct-X	Evaporative*
ICA-20	19.4	74	114	42	4960	...	Semi-H.	20	1750	208/220/440	R-22	65	Direct-X	Evaporative*
ICA-25	23.6	78	125	49	5150	...	Semi-H.	25	1750	208/220/440	R-22	80	Direct-X	Evaporative*
ICA-30	30.4	85	127	54	6750	...	Semi-H.	30	1750	208/220/440	R-22	95	Direct-X	Evaporative*
ICA-40	40.9	94	146	61	7850	...	Semi-H.	40	1750	208/220/440	R-22	125	Direct-X	Evaporative*
ICA-50	51.0	106	188	61	10,000	...	Semi-H.	50	1750	208/220/440	R-22	160	Direct-X	Evaporative*
ICA-60	58.1	104	218	65	13,000	...	Semi-H.	60	1750	208/220/440	R-22	185	Direct-X	Evaporative*

*Is available air cooled, designated IC-10AC, etc.

Model No.	Capacity (Nom. Tons)	Overall Dimensions (In.) Height	Length	Depth	Operating Weight (Lbs)	Compressor Make	Compressor Type	Motor Hp	Motor RPM	Motor Volts	Refrigerant No.	Refrigerant Charge	Cooler Type	Condenser Type
Versaire & Series R—American-Standard Industrial Div., Detroit 32, Mich.														
20NN13	27.4	62¾	90	35	3380	Carrier	Access. H.	24.4*	1750	208/220/440/550	R-22	75	Shell & Tube	Shell & Tube
30PN13	28.9	62¾	90	35	3680	Carrier	Access. H.	24.7*	1750	208/220/440/550	R-22	84	Shell & Tube	Shell & Tube
40NP14	35.2	62¾	90	35	3445	Carrier	Access. H.	31.3*	1750	208/220/440/550	R-22	73	Shell & Tube	Shell & Tube
40PP14	37.3	62¾	90	35	3745	Carrier	Access. H.	31.6*	1750	208/220/440/550	R-22	82	Shell & Tube	Shell & Tube
40RP14	38.6	62¾	90	35	3765	Carrier	Access. H.	31.8*	1750	208/220/440/550	R-22	89	Shell & Tube	Shell & Tube
50PR15	44.2	65½	90	35	4170	Carrier	Access. H.	39.6*	1750	208/220/440/550	R-22	98	Shell & Tube	Shell & Tube
50RR15	46.0	65½	90	35	4190	Carrier	Access. H.	40.0*	1750	208/220/440/550	R-22	103	Shell & Tube	Shell & Tube
50RT16	54.1	65½	90	35	4380	Carrier	Access. H.	46.3*	1750	208/220/440/550	R-22	109	Shell & Tube	Shell & Tube
50TT16	57.6	65½	90	35	4700	Carrier	Access. H.	47.1*	1750	208/220/440/550	R-22	136	Shell & Tube	Shell & Tube
8CD15	7.5	37	63½	23¼	1300	Worth.	Access. H.	8.1*	1750	208/220/440	R-23	14	Shell & Tube	Shell & Coil
10DE15	8.9	38	64¾	23¼	1325	Worth.	Access. H.	9.2*	1750	208/220/440	R-22	15	Shell & Tube	Shell & Coil
10D2C26	9.1	37½	64¼	36¼	1525	Worth.	Access. H.	(2)5.2*	1750	208/220/440	R-22	34	Shell & Tube	Shell & Coil
15E2D210	14.9	38¼	71	36¾	2220	Worth.	Access. H.	(2)8.1*	1750	208/220/440	R-22	38	Shell & Tube	Shell & Coil
20F2E210	17.8	43¾	80	42¾	2800	Worth.	Access. H.	(2)9.2*	1750	208/220/440	R-22	38	Shell & Tube	Shell & Coil
15GG14	15.2	59⅛	83¾	34¼	2085	Worth.	Access. H.	13.7*	1750	208/220/440/550	R-22	35	Shell & Tube	Shell & Tube
20HH15	19.4	61¾	84⅝	34¼	2255	Worth.	Access. H.	17.1*	1750	208/220/440/550	R-22	46	Shell & Tube	Shell & Tube
25HJ16	22.8	61¾	88⅝	34¼	2365	Worth.	Access. H.	20.4*	1750	208/220/440/550	R-22	46	Shell & Tube	Shell & Tube
65UV17	64.3	77¾	106⅝	38¼	4940	Worth.	Access. H.	56.0*	1750	208/220/440/550	R-22	108	Shell & Tube	Shell & Tube
75VW18	75.4	81¾	108⅝	39¼	6105	Worth.	Access. H.	64.4*	1750	208/220/440/550	R-22	145	Shell & Tube	Shell & Tube

*KW, not hp.

Model No.	Capacity (Nom. Tons)	Overall Dimensions (In.) Height	Length	Depth	Operating Weight (Lbs)	Compressor Make	Compressor Type	Motor Hp	Motor RPM	Motor Volts	Refrigerant No.	Refrigerant Charge	Cooler Type	Condenser Type
Vikimatic—Vikimatic, Inc., 1747 Chester Ave., Cleveland 14, Ohio														
CW-201	2	27½	23¼	17⅜	250	Bendix-W.	Herm.	2	1725	230	R-22	2‡3	Tube-In-Tube	Chemical-Clean
CW-301	3	27½	23¼	17⅜	304	Tecumseh	Herm.	3	1725	230	R-22	2‡11	Tube-In-Tube	Chemical-Clean
CW-501	5	32½	33	20	431	Tecumseh	Herm.	5	1725	230	R-22	5‡5	Tube-In-Tube	Chemical-Clean
CAR-201	2	27½	23¼	17⅜	235	Bendix-W.	Herm.	3	1725	230	R-22	6	Tube-In-Tube	Fin-Tube
CAR-301	3	27½	23¼	17⅜	274	Tecumseh	Herm.	3	1725	230	R-22	6	Tube-In-Tube	Fin-Tube
CAR-501	5	32½	33	20	402	Tecumseh	Herm.	5	1725	230	R-22	10	Tube-In-Tube	Fin-Tube
Weatherking—Weatherking of Florida, 1604 Sligh Blvd., Orlando, Fla.														
CW3	3.2	34	28	18	350	Tecumseh	Herm.	3	1750	220	R-22	6	Shell & Coil	Tube-In-Tube
CW5	5.7	39	38	18	435	Tecumseh	Herm.	5	1750	220	R-22	9	Shell & Coil	Tube-In-Tube
CW7½	7.4	44	42	27	640	Copeland	Semi-H.	7½	1750	220	R-22	12	Shell & Coil	Tube-In-Tube
CW10	9.5	46	42	30	760	Copeland	Semi-H.	10	1750	220	R-22	15	Shell & Coil	Tube-In-Tube
CW15	16.5	46	45	34	1100	Copeland	Semi-H.	20	1750	220	R-22	24	Shell & Coil	Tube-In-Tube
CWA3	3.8	32	61	29	580	Tecumseh	Herm.	3	1750	220	R-22	10	Shell & Coil	Finned Tube
CWA5	5.2	61	61	29	980	Tecumseh	Herm.	5	1750	220	R-22	16	Shell & Coil	Finned Tube
CWA7½	9.5	61	61	29	1150	Copeland	Semi-H.	7½	1750	220	R-22	22	Shell & Coil	Finned Tube
CWA10	9.4	61	61	29	1360	Copeland	Semi-H.	10	1750	220	R-22	26	Shell & Coil	Finned Tube
CWA15	14.5	71	76	34	1720	Copeland	Semi-H.	20	1750	220	R-22	38	Shell & Coil	Finned Tube
Westernaire—Western Supply Co., Mfg. Div., Hutchinson, Kan.														
201-3CW	2	27½	23¼	17⅜	247	Tecumseh	Herm.	2	1750	208/220/230	R-22	35 oz.	Tube-In-Tube	Coaxial
301-3CW	3	27½	23¼	17⅜	275	Tecumseh	Herm.	3	1750	208/220/230	R-22	44 oz.	Tube-In-Tube	Coaxial
501-3CW	5	34½	33	20	454	Tecumseh	Herm.	5	1750	208/220/230	R-22	85 oz.	Tube-In-Tube	Coaxial
201-3CAR	2	27½	33¼	17⅜	240	Tecumseh	Herm.	2	1750	208/220/230	R-22	96 oz.	Tube-In-Tube	Finned Tube
301-3CAR	3	27½	33¼	17⅜	260	Tecumseh	Herm.	3	1750	208/220/230	R-22	96 oz.	Tube-In-Tube	Finned Tube
501-3CAR	5	34½	33	20	405	Tecumseh	Herm.	5	1750	208/220/230	R-22	160 oz.	Tube-In-Tube	Finned Tube
Westinghouse—Westinghouse Electric Corp., Staunton, Va.														
PKB-86	20	66½	107	33½	2819	West.	...	...	...	...	...	...	...	...
PKB-108	25	66½	107	33½	2917	West.	...	...	...	...	...	...	...	...
PKB-125	32	68½	107	33½	3270	West.	...	...	...	...	...	...	...	...
PKB-150	40	68½	107	33½	3560	West.	...	...	...	...	...	...	...	...
PKB-185	50	71¾	107	33½	4012	West.	...	...	...	...	...	...	...	...
PKB-2125	63	75¾	107	47½	6100	West.	...	...	...	...	...	...	...	...
PKB-2150	85	83¼	107	47½	7363	West.	...	...	...	...	...	...	...	...
PGB-2185	101	83¼	107	47½	7629	West.	...	...	...	...	...	...	...	...

Compressor Data

(Continued from Page 60, Col. 2)

Model No.	Type	Hp.	Cooling Method	Cylinders	Bore	Stroke	R.P.M.
TECUMSEH							
AP411	Hermetic	¼	....	1	1 1/32	11/16	3500
AU3	Hermetic	....	Suction	1	....	....	3500
AUR13	Hermetic	....	Suction	1	....	....	3500
AR-26	Hermetic	⅛	....	1	1 3/8	5/8	3500
AU-14	Hermetic	1	....	1	1 1/4	5/8	3500
AU1M12	Hermetic	1	Suction	1	1 7/16	3/4	3500
AU-1612	Hermetic	1	....	1	1 3/8	3/4	3500
AU-1P12	Hermetic	1	....	1	1 1/2	3/4	3500
AU1P112	Hermetic	1	Suction	1	1 1/2	3/4	3500
B1516	Hermetic	1	....	2	1 5/16	1 1/64	1750
B1613	Hermetic	1	....	2	1 3/8	13/16	1750
B1616	Hermetic	1	....	2	1 3/8	1 1/64	1750
B21T18	Hermetic	2	....	2	1 5/8	1 1/8	1750
B21U18	Hermetic	2	....	2	1 11/16	1 1/8	1750
B32M16	Hermetic	1½	Suction	2	1 11/16	1 1/8	1750
B32516	Hermetic	1½	Suction	2	1 7/16	1 1/64	1750
B32P16	Hermetic	1½	....	2	1 1/2	1 1/64	1750
B74P18	Hermetic	1¾	Suction	2	1 5/16	1 1/64	1750
B74T16	Hermetic	2	....	2	1 5/8	1 1/64	1750
B8513	Hermetic	*	Suction	2	....	....	1750
CL25	Hermetic	2½	Suction	2	....	....	3500
CL30	Hermetic	3	Suction	2	1 3/4	7/8	3500
CL35	Hermetic	3½	Suction	2	....	....	3500

Liquid Chillers

(Continued From Page 61, Col. 3)

Model No.	Capacity	Overall Dimensions (In.) Height	Length	Depth	Operating Weight	Compressor Make	Compressor Type	Compressor Motor Hp	RPM	Volts	Refrigerant No.	Charge	Cooler Type	Condenser Type
Worthington—Worthington Corp., Ampere Station, East Orange, N. J.														
FCH-8	7.45	37	62	22	1300	Worth.	Semi-H.	7.5	1750	As specified	R-22	14	Shell & Tube	Shell & Coil
FCH-10S	8.8	36	64	22	1325	Worth.	Semi-H.	10	1750	As specified	R-22	15	Shell & Tube	Shell & Coil
FCH-10	9.1	37	64	26	1535	Worth.	Semi-H.	(2)5	1750	As specified	R-22	24	Shell & Tube	Shell & Coil
FCH-15	14.8	36	71	29	2220	Worth.	Semi-H.	(2)7.5	1750	As specified	R-22	28	Shell & Tube	Shell & Coil
FCH-20	17.8	44	80	33	2800	Worth.	Semi-H.	(2)10	1750	As specified	R-22	39	Shell & Tube	Shell & Coil
FCH-150	15.2	60	88	23	2085	Worth.	Semi-H.	15	1750	As specified	R-22	35	Shell & Tube	Shell & Tube
FCH-200	19.4	61	88	23	2355	Worth.	Semi-H.	20	1750	As specified	R-22	46	Shell & Tube	Shell & Tube
FCH-250	23.8	61	88	23	2385	Worth.	Semi-H.	25	1750	As specified	R-22	46	Shell & Tube	Shell & Tube
FCH-300	30.4	63	88	23	2810	Worth.	Semi-H.	30	1750	As specified	R-22	64	Shell & Tube	Shell & Tube
FCH-400	37.5	71	102	29	3800	Worth.	Semi-H.	40	1750	As specified	R-22	88	Shell & Tube	Shell & Tube
FCH-500	47.4	73	102	29	4450	Worth.	Semi-H.	50	1750	As specified	R-22	99	Shell & Tube	Shell & Tube
FCH-600	56.0	75	102	29	4751	Worth.	Semi-H.	60	1750	As specified	R-22	107	Shell & Tube	Shell & Tube
FCH-650	64.2	77	105	29	4940	Worth.	Semi-H.	65	1750	As specified	R-22	108	Shell & Tube	Shell & Tube
FCH-750	75.4	81	108	29	6105	Worth.	Semi-H.	75	1750	As specified	R-22	142	Shell & Tube	Shell & Tube
FCH-1000	98.7	81	148	33	8385	Worth.	Semi-H.	100	1750	As specified	R-22	145	Shell & Tube	Shell & Tube
FCH-1100	109.0	81	148	33	8442	Worth.	Semi-H.	110	1750	As specified	R-22	225	Shell & Tube	Shell & Tube
FCH-1250	129.8	83	150	36	9747	Worth.	Semi-H.	125	1750	As specified	R-22	253	Shell & Tube	Shell & Tube
FCH-1500	154.5	87	150	36	11,942	Worth.	Semi-H.	150	1750	As specified	R-22	302	Shell & Tube	Shell & Tube
FCV-150	15.5	60	89	23	2114	Worth.	Coupled-D	15	1750	As specified	R-22	35	Shell & Tube	Shell & Tube
FCV-200	20.2	61	89	23	2211	Worth.	Coupled-D	20	1750	As specified	R-22	46	Shell & Tube	Shell & Tube
FCV-250	24.8	61	89	23	2346	Worth.	Coupled-D	25	1750	As specified	R-22	48	Shell & Tube	Shell & Tube
FCV-300	31.4	63	89	23	2809	Worth.	Coupled-D	30	1750	As specified	R-22	64	Shell & Tube	Shell & Tube
FCV-400	37.9	71	102	31	3842	Worth.	Coupled-D	40	1750	As specified	R-22	85	Shell & Tube	Shell & Tube
FCV-500	47.9	73	102	31	4394	Worth.	Coupled-D	50	1750	As specified	R-22	96	Shell & Tube	Shell & Tube
FCV-600	56.6	76	102	31	4816	Worth.	Coupled-D	60	1750	As specified	R-22	104	Shell & Tube	Shell & Tube
FCV-650	64.9	76	106	31	4916	Worth.	Coupled-D	65	1750	As specified	R-22	105	Shell & Tube	Shell & Tube
FCV-750	76.2	81	109	31	5845	Worth.	Coupled-D	75	1750	As specified	R-22	142	Shell & Tube	Shell & Tube
FCV-800	82.1	78	148	34	8277	Worth.	Coupled-D	80	1750	As specified	R-22	145	Shell & Tube	Shell & Tube
FCV-900	90.5	78	148	34	8559	Worth.	Coupled-D	90	1750	As specified	R-22	160	Shell & Tube	Shell & Tube
FCV-1000	110.1	81	148	34	9494	Worth.	Coupled-D	100	1750	As specified	R-22	186	Shell & Tube	Shell & Tube
FCV-1250	131.1	83	150	36	10,953	Worth.	Coupled-D	125	1750	As specified	R-22	253	Shell & Tube	Shell & Tube
FCV-1500	156.0	89	150	36	13,367	Worth.	Coupled-D	150	1750	As specified	R-22	302	Shell & Tube	Shell & Tube

Bar-Brook Ratings

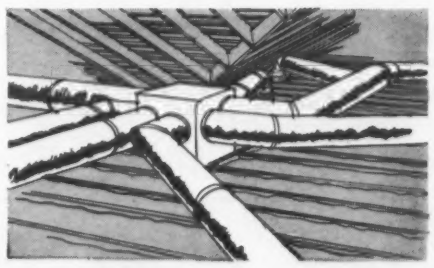
SHREVEPORT, La.—Capacity ratings for Bar-Brook air conditioning units are not yet certified by ARI but are being tested in accordance with ARI standards by an independent laboratory, Taylor Barnes, president, informed the NEWS.

"We hope to be listed in their bulletin soon," he said.

TIME IS MONEY— G-B DUCT SAVES TIME

As much as 50% of installation time can be saved by using G-B DUCT—the round, prefabricated glass fiber duct. Molded into one-piece six-foot sections, G-B DUCT is installed with only a pocket knife, standard sheet metal fittings and vapor barrier tape. Everything's done right on the job site—there's no costly, time-consuming in-the-shop assembly.

As well as being an efficient air-handling system, G-B DUCT cuts heat loss or gain to a bare minimum. This means homeowners realize substantial savings in heating and cooling expenses. What's more, G-B DUCT eliminates fan and equipment noises. Write today for a free product brochure.



GUSTIN-BACON Manufacturing Company

GUSTIN gb BACON

218 W. 10TH STREET, KANSAS CITY, MO.

World Trade Corner

AMERICAN MOTORS CORP. announced that a new subsidiary company has been formed in Puerto Rico for the manufacture of Kelvinator home refrigerators. The new company is expected to enable Kelvinator International Corp. to quadruple its current sales volume in Puerto Rico and the Caribbean markets by the end of 1965. Pilot production on a 10-cu ft model is scheduled for June in the 22,000-sq ft plant in Bayamon near San Juan.

* * *

SKOKIE INTERNATIONAL, 3250 W. Touhy Ave., Skokie, Ill., a division of Rolled Steel Corp., has been formed as an export management company, it was reported by Heinz O. Spier, vice president. Spier was formerly export manager for Remington Corp. He said the new firm has concluded a number of exclusive, long-term contracts with various manufacturers in the air conditioning and refrigeration field.

* * *

THE BOARD OF TRADE, London, England, was asked to recommend the making of an Order in Council to require imported household and commercial refrigerator cabinets—with or without a refrigerating system—to bear an indication or origin at the time of importation, sales, and exposure for sales in the United Kingdom.

* * *

AMERICAN AIR FILTER CO., INC., Louisville, Ky., through its network of manufacturers' representatives and licensees in 37 countries throughout the free world, achieved a record high income in 1960 from overseas sales and royalties, W. G. Frank, president, reported. At the same time, AAF's Canadian subsidiary, AAF of Canada, Ltd., Montreal, established new highs in both orders booked and products shipped.

* * *

POLK BROS., Chicago retail chain, is exhibiting at trade shows around the world a 40-ft display of eight reconditioned appliances. The appliances were traded-in by Chicago area customers of Polk and reconditioned by the firm. Project objective: to find new markets for such appliances (washers, refrigerators, freezers, electric ranges) and at the same time offer a way for overseas businessmen to bring American-made conveniences into homes in other countries.

* * *

PHILCO CORP. announced that Philadelphia International Investment Corp., a subsidiary of the Philadelphia National Bank, has signed an investment agreement for a financing program involving $450,000 with Industrias Nacional de Enseres Electricos S.A., Bogota, Colombia, a licensee of Philco Corp. S.A., Fribourg, Switzerland, to facilitate expansion of Philco home appliance, radio and TV products in Colombia.

Owner's Report--

How Florida Chain Applies & Views Industry's Products

THIS IS ONE OF A SERIES of articles, presented periodically, which presents the experience and evaluation of users of air conditioning and refrigeration equipment. The editors believe these reports have a value not only to other users of the industry's products, but also to those who design, engineer, manufacture, install, and service such equipment. (This is the first part of a two-part article.)

By Phil B. Redeker

MIAMI, Fla.—All food merchandisers recognize the requirement for dependable refrigeration and air conditioning equipment. Some, like the Food Fair Chain, have demonstrated that the best refrigeration and air conditioning available is not only the most economical to buy, maintain, and operate but that sound engineering, good installation practice, and preventive maintenance are essential tools of management.

Food Fair's Southern division in Miami operates more than 80 supermarkets in southern Florida; plus an ultra modern, completely air conditioned bakery; plus a 50,000-sq ft cold storage plant handling 10 million pounds of fresh beef and lamb per month. Worthy of note is Food Fair's universal use of flake-ice machines in every supermarket and at strategic distribution points to provide an adequate supply of flake-ice and assure management that every item of fresh seafood, fresh fruits and vegetables reaches the consumer in the best possible condition.

Problems of Climate

South Florida has many climatic attributes and several special problems for the refrigeration and air conditioning user, engineer, and serviceman. Among these are: a 12-month air conditioning season, at least in retail stores; year-round relative humidity at or near 80%; and a water supply that is suitable for drinking only when properly flavored, but generally unsatisfactory for use in refrigerant condensers, cooling towers, or evaporative condensers without extensive chemical treatment under regular supervision of a professional water treatment engineer.

In line with over-all company policy of using only the best in refrigeration and air conditioning and in recognition of the special problems peculiar to Florida, company management selected industry veteran James J. Corey to head up refrigeration engineering in the Southern Division.

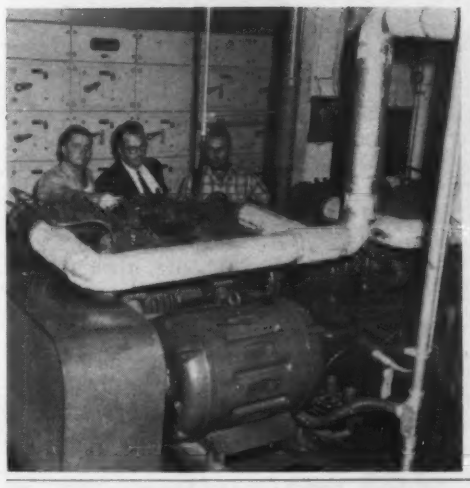
Jim Corey Reports In

If the name "Jim Corey" sounds familiar to some of those who have been around the industry for a while—particularly those in the eastern half of the country—they're right. It's the same Jim Corey whose career in the industry goes back more than 35 years, factory engineer and sales representative, past president of New York section of ASRE and after the war, as a manufacturer in his own right. But we are speaking now of the man in charge of air conditioning and refrigeration for the southern division of Food Fair markets. How did he get to Miami?

"My doctor told me to get out of the 'rat race' and to live in a little more friendly climate," Jim smiles. "He was right about the climate, but I think the 'rat race' is moving into this part of the country, too."

From his broad background in the industry and his experience for the past ten years in a rapidly growing food supermarket chain operation, Corey has developed some definite ideas about what's right and what's wrong with equipment and of proper methods of maintenance—most important when it is recalled that Corey has the responsibility for several million dollars in perishable foods and equipment. Ably assisting him are refrigeration foremen Herbert Nota and Henry Godfrey, each an industry veteran in his own right. Twelve servicemen plus four cold storage plant operators complete the staff.

Each serviceman is assigned a group of stores for preventive maintenance and repair. Each foreman maintains close contact with his own men by telephone and daily on-the-job visits to each serviceman. Problems are resolved on the spot and necessary supplies are promptly dispatched to the point of need.

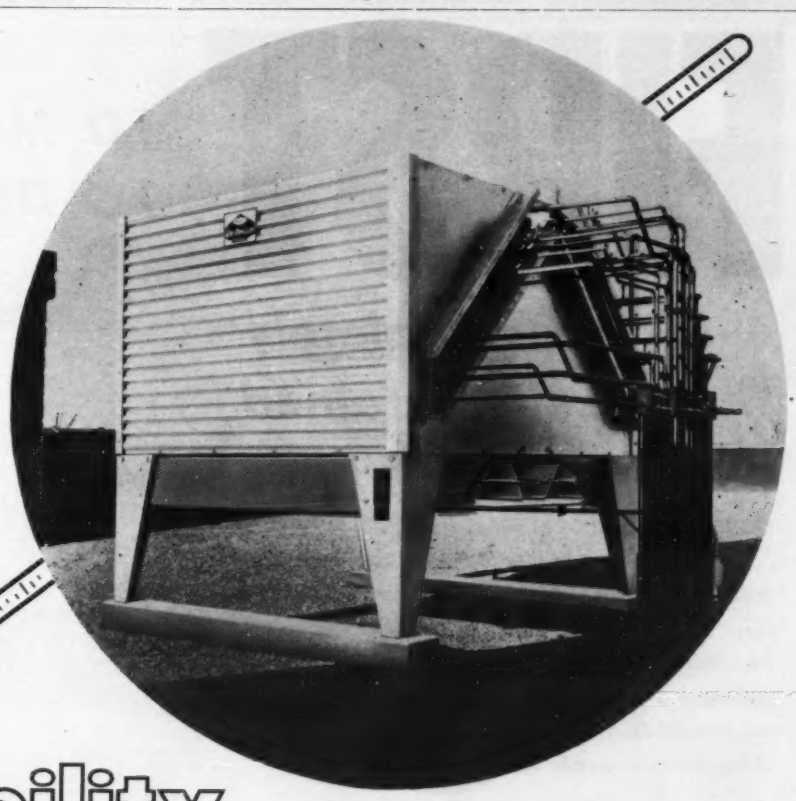


CONTINUED CHECKING of equipment and consideration of changes for improvement are an important part of the job of Jim Corey (center) who heads up refrigeration work for the Southern Div., Food Fair. Here he checks over an air conditioning system with Herbert Nota (left) and Henry Godfrey (right).

Once in every four-week period, Corey assembles all servicemen and foremen for a review of maintenance cost, analysis of service calls, night calls, and repeat calls occurring in each serviceman's group of

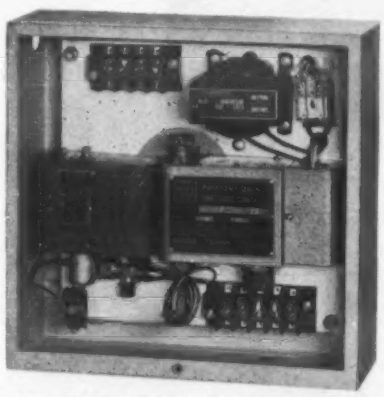
(Continued on next page)

when the Dry Bulb goes down



controlability stands out in Marley DriCooler®

AIR COOLED CONDENSERS



DIAL THE PRESSURE YOU WANT
DriCooler Damper Control does the rest. A single setting of this simple control maintains correct pressure regardless of dry bulb fluctuation.

SIMPLY SUCCESSFUL—SUCCESSFULLY SIMPLE: that is a factual description of DriCooler Damper Control System. Design simplicity that eliminates pressure valves, by-pass piping and oversized receivers is basic in the Marley method that requires no coil flooding, no added refrigerant charge in low dry bulb periods.

DriCooler Damper Control System is pressure actuated and ignores dry bulb drops. By governing intake air and air flow, it maintains uniform condensing temperature during critical periods without adjustments. It is never necessary to out-guess the weather man.

DriCooler Damper Controls are building outstanding records of successful service in cities with widely varying dry bulb conditions, like Douglas, Arizona and Montreal, Quebec. Ask the Marley Man to show you facsimiles of certified recordings that show how DriCooler Damper Controls perform on single- or multi-circuit jobs.

Customer Certified

U. S. and Foreign Patents Pending

THE MARLEY COMPANY • KANSAS CITY 14, MISSOURI

Owner's Report--

(Continued from preceding page)

stores. Suggestions for modification of equipment to improve operations are received and discussed at these meetings.

Viewpoint on Condensers

One major modification program currently under way involves replacement of water-cooled condensing equipment with air-cooled condensers. Corey says that he sees little merit in evaporatively cooled equipment in an area where wet-bulb temperature hovers around 80° for most of the year and the dry-bulb temperature seldom exceeds 90°. He makes justifiable exception in the case of the cold storage plant where four 100-ton evaporative ammonia condensers are kept in good condition by suitable water treatment supervised under contract by a water treatment engineer.

Particular emphasis is placed on installation practices. All soldering and brazing is done with an inert gas flowing through piping to prevent internal oxidation and scale. Each refrigerationg system is evacuated to 150 microns absolute pressure, required to hold the vacuum 24 hours, then flushed with refrigerant vapor and re-evacuated. Sporlan "Catchall" driers and moisture indicators are standard equipment, according to Corey.

"Strict adherence to such sound practice has paid big dividends in reduced maintenance cost," says Corey. "For example, no compressor or hermetic motor failures traceable to moisture or the usual effects of moisture in refrigerant systems, have been experienced."

Corey recommends that manufacturers of refrigerated food merchandising equipment give serious considerations to some specific details that would tend to reduce maintenance costs and result in a greater degree of user satisfaction.

"One factor that must be kept in mind with the 7-day food store operation is that there is almost no opportunity to clean a refrigerated fixture," Corey points out. "Naturally, we thus are much in favor of the fixture that requires the minimum of care and cleaning, where the drainage is good and one which will continue to operate well even though there is labels, gum wrappers, lint, and other miscellaneous materials that will eventually find their way to the drain.

"Coils that ice up are always a problem, but they are even more so when you must depend on them every day, and have only evenings in which to perform any checkup or major overhaul on a system."

INSTALLATION OF NEW Kramer-Trenton air-cooled condensers is part of the Food Fair program of providing correct type of equipment for the area in which its markets are located.

A continuing growth in the use of open-type refrigerated display fixtures has given increased emphasis to what Corey terms "air balance" in such fixtures, and he thinks the problem is even greater in Miami, where air conditioning is a year-round factor.

"The answer, stated simply, is to keep all products below the 'load line' in the display cases at all times," Corey declares. "On most makes of cases, this 'load line' is clearly marked. The cold air from the rear cold air discharge duct flows over the product and is recaptured and pulled down the front intake or return air flue.

"Overloading cases causes the cold air to be deflected out of the case into the room resulting in warm, moisture laden room air being drawn down the front flue. Then the case air temperatures start rising immediately, and the refrigeration coil collects frost faster than the subsequent defrost cycles can handle. A heavily frosted coil cannot operate at full efficiency, and the case temperatures will rise. It is important to keep all products below the 'load line'—even when heavy traffic and sales is anticipated.

Problem With Drafts

"Drafts from fans, doors, air conditioning ducts, etc., can displace the refrigerated air with the same consequences described above. Watch for and avoid drafts blowing over or too near all open self-service frozen food cases. We consider any rise of 10°F in a perishable product to be too much."

Among the major problems encountered in the operation of the wide range of equipment which comes under his supervision, Corey puts problems with defrosting systems near the top. He says that he hasn't recorded much difference between types of systems—with hot gas types the problem comes in the refrigerant circuiting mostly with valves and with electric defrost problems are found with a heater.

"From the user's standpoint, the desirable method is a simple, single-control method of defrost that will be positive in its action," says Corey. "Maybe this isn't attainable yet, but I do know that maintenance costs on defrosting systems is somewhat excessive."

Use of Reheat

Direct control of humidity and the use of reheat as an integral function of air conditioning may not always be economically justifiable in the design of supermarkets, but here again, Florida climate creates some unusual problems. Excessive condensation on the exterior of refrigerated cases occurs even in air conditioned supermarkets.

While electric reheat has been used to a limited extent in Food Fair's Southern division, Corey feels that a more economical method must be found and to this end he is experimenting with use of rejected heat from refrigeration of display fixtures.

"This concept appears to have considerable merit and could possibly result in solving some problems for other operators even in regions where the humidity problem is less severe than in South Florida," he says.

When reheat is incorporated in air conditioning systems, heating elements are installed right at the blower. Complete temperature and humidity control is provided by use of humidistats as well as thermostats, and the reheat element cycles simultaneously when operation for humidity control is called for by the humidistat.

(To Be Continued)

FIRST

TO MANUFACTURE
TO DEVELOP

completely self-contained air conditioning units

GOVERNAIR CORPORATION

. . . began the manufacture of the first completely self-contained commercial type air conditioning units in 1937. Development has been continuous since that time, and Governair now manufactures packaged air conditioning units, for both commercial and industrial application, in the widest range of capacities available in the industry.

Governair Corporation also constantly recognizes the importance of producing a high quality, completely flexible system to benefit the end user best. Production facilities are tailored to accomplish these ends economically. This, in turn, makes the Governair prices highly competitive, even though only the finest components are used in the assembly.

Development of the larger tonnage units has made available the economy of installation and reliability of a factory balanced and tested package system . . . for even the largest industrial requirements. Single units of 120 ton capacity are being fabricated regularly — and to the exact specifications of the customer.

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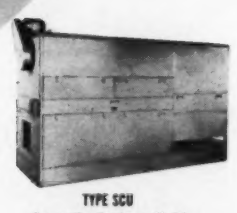
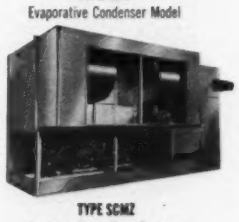
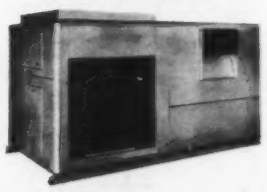
4840 NORTH SEWELL
OKLAHOMA CITY, OKLAHOMA



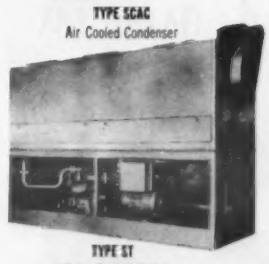
TYPE SCU
Evaporative Condenser Model



TYPE SCMZ
Complete Multi-Zone Package



TYPE SCAC
Air Cooled Condenser



TYPE ST
Water Cooled Model

TYPE STMZ
Water Cooled Multi-Zone

Write for detailed information, or consult your yellow page directory for the name of our local representative.

GOVERNAIR

One-Story Factory Finds Packaged Units Most Economical Way To Air Condition

3 Separate Buildings Made Central System Too Costly, Complex

PITMAN, N. J. — Air-cooled packaged air conditioning equipment in 25 and 30-ton sizes was used to air condition all 60,000 sq ft of a southern New Jersey plant which manufactures relays for U. S. missiles.

The packaged approach proved the most economical way for Struthers-Dunn, Inc., of Pitman to air condition a one-story plant which is divided into three separate buildings connected by passageways. The result has been more cooling per dollar of investment.

A large central system, requiring the selection and installation of separate components, would have meant increased engineering time, more complex controls, more piping and plumbing, and higher costs, according to company officials.

6 Units Installed In Rooms Built Against Outside Walls

Ben Laury of Laury Heating Co., Vineland, N. J. dealer for Carrier Air Conditioning Co., installed the system which handles 62,000 cfm of air and supplies 155 tons of cooling capacity. Laury located six packaged units in five equipment rooms built against the outside walls of the plant. Ductwork running from the units across the ceilings of the fabrication section, a large assembly area, and a front office and planning section delivers cooling to some 400 men and women employed in these three sections. The equipment rooms provide extra storage space in addition to housing the air conditioning units. By selecting packaged equipment, Struthers-Dunn also made it possible to shut down one unit for any reason without depriving the entire plant of cooling.

Each Unit Connects To Roof-Top Condenser

Each of the units is connected to air-cooled condensers on the roof. Laury used one 10-ton and two 7½-ton condensers with each of the five 25-ton packaged units and four 7½-ton condensers with the 30-ton unit.

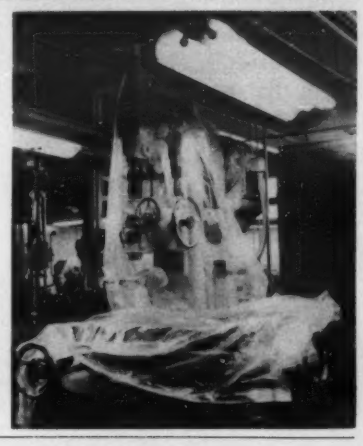
Struthers-Dunn requested an all air-cooled system in order not to overload the water source, which is a pump, due to the remote location of the plant. Company officials also feel that air-cooled equipment presents fewer service problems and most of the maintenance can be handled by the plant maintenance crew.

Before air conditioning, summer working conditions were often uncomfortable, particularly in the fabrication section where electric and gas-burning ovens, used to make electric devices, and a large open-flame gas retort for melting metals

(Continued on next page)

ASSEMBLY SECTION is cooled by overhead ducts which extend from a 30-ton packaged air conditioner at one side of the plant and a 25-ton unit at the other side. Employes fit minute metal pieces into relay devices.

ABOVE: Air-cooled condensers on the roof reduce maintenance. Here, Ben Laury of Laury Heating Co., Carrier dealer in Vineland, N. J., points to a fan on one of six 7½-ton condensing units he installed at Struthers-Dunn early this year.



RIGHT: Before air conditioning this $25,000 jig-bore had to be covered with plastic (as shown here), when not in use, to keep it free of dust and rust. This is no longer necessary because of lower humidity and the filtering of air.

Introducing the Arkla

VAPORGLIDE

Arkla-Servel proudly announces a design and engineering vehicle which:

1. Gives ⅓rd more power without pistons or valves.
2. Provides lowest ownership cost... full 5-year warranty.
3. Is vibration-free... never needs a tune-up.
4. Has double and triple normal life expectancy, because there are no moving parts to wear out.
5. Won't lose capacity or jump operating costs with age, because it has no efficiency-robbing friction.

No, that's not a space age automobile... it's the Arkla-Servel Sun Valley All-Year gas air conditioner, as it compares to conventional electric central system air conditioners.

Building this kind of satisfaction into your homes is the best way we know of assuring future sales and stopping profit-robbing recalls at the same time.

If you find the comparisons above a bit hard to believe, we respectfully invite you to talk to your local gas company, or write Arkla Air Conditioning Corporation.

ARKLA-Servel MAGIC GAS AIR CONDITIONING

ARKLA AIR CONDITIONING CORP • SHANNON BLDG. • LITTLE ROCK, ARK.

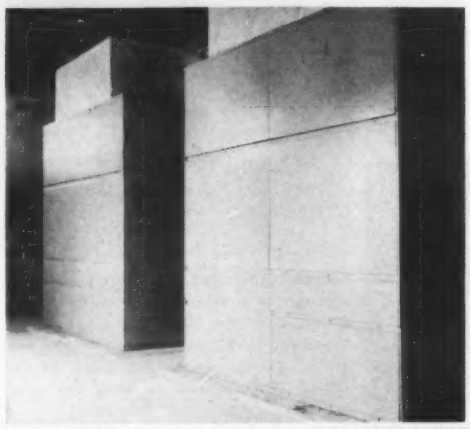
Packaged Units--

(Continued from preceding page)
created severe "hot spots."

Now, however, these areas are cooled by three of the 25-ton packaged units and Struthers-Dunn officials have noticed a marked improvement in production efficiency and employe morale.

The production manager reports that perspiring fingers no longer tarnish the tiny gold and palladium pieces that are fitted into intricate relays for everything from traffic signals to guided missiles. Visits to the plant dispensary have dropped and even the consumption of aspirin has diminished.

The personnel manager says air conditioning has brought a noticeable change in attitudes toward work. "No longer do employes feel sick and want to go home at noon," she says. "In fact, most of them would rather come to work in hot weather."



SIX PACKAGED air conditioners are housed in equipment rooms erected against outside walls. The structures also provide additional storage space, badly needed at expanding Struthers-Dunn.

The employes back up management's observations.

An assembly employe, who has been with the firm 15 years, says, "Air conditioning makes it much easier to handle these tiny pieces of metal. My hands cannot be sweaty."

A machine operator in the pre-assembly department calls air conditioning "the greatest improvement the company has ever made. Now, I don't tire as easily."

Bodine Electric To Complete Cooling Job That Was Begun 3 Years Ago

CHICAGO — A plan begun three years ago to fully air condition the Bodine Electric Co. headquarters in Chicago will be completed this spring.

When the company's office-factory was built in 1957, a year-round air conditioning system was installed in the two-story office covering 45,000 sq ft.

At the same time, the 148,000-sq ft factory was equipped with heating and ventilating units and provision was made to add coiling coils later. Piping for chilled water was also installed.

Now, Carrier Air Conditioning Co. has received a contract to supply 16 cooling coils, a cooling tower, and hermetic centrifugal refrigerating machine with 500 tons' cooling capacity for the factory area. The water chiller will be located next to a similar Carrier unit with 125 tons' capacity which now serves the office and 350-seat cafeteria.

Bodine manufactures over 3,500 different types of fractional horsepower motors. The cooling and dehumidifying equipment is being added to improve product quality as well as to provide a clean, comfortable environment for employes, according to the officers of the company.

Envelope Plant To Install Cooling, Humidity Control

CHICAGO — Automatically controlled humidity and air conditioning units will be installed in a new $275,000 western plant to be built at San Fernando Rd. and Justin Ave. in Glendale, Calif., for Transo Envelope Co. here.

The units will be installed with new high-speed equipment which, according to the company, will quadruple the output of the present plant at 900 Paula Ave. in Glendale. The equipment will include electronic devices to control speed, quality, and uniformity with a high degree of accuracy, it was indicated.

Licensing Was Topic Of Chicago RACCA Panel Discussion

CHICAGO—At its 14th annual meeting and election of officers, the Refrigeration & Air Conditioning Contractors Association of Chicago provided an opportunity for all members to discuss the pros and cons of licensing for the air conditioning heating, and refrigeration contractor.

A panel took sides, for and against, by pre-arrangement, to initiate the discussion, followed by audience participation. This elicited many salient points for consideration of the Code & Licensing Committee, it was noted.

All officers were re-elected, including Daniel M. Brown, vice president of Systems Engineering Corp., president; Harvey O. Milller, president of Murphy & Miller, Inc., vice president; and Oliver P. Crose, president of The Crose Co., secretary-treasurer.

. . . I can get just the fin spacing, tonnage and CFM I want."

Now, Halstead & Mitchell gives you a choice of 6, 7, 8 or 10 fins per inch . . . makes it much easier to match a central fan-coil unit to a particular job or to meet specifications.

And look what else H&M offers: a selection of three coil face areas for each model; direct expansion or chilled water cooling coils (1 to 8 rows); hot water, standard steam or non-freeze steam heating coils (1 or 2 rows); cooling capacities of 3 to 92 nominal tons with 880 to 47,750 CFM; Turbu-Flo coils arranged for right or left-hand connections; horizontal or vertical mounting for discharge in any direction . . . and every accessory item you need to simplify your installation.

Why don't you check H&M Central System Air Conditioners? Call your wholesaler or write for Bulletin AHU-100. Halstead & Mitchell Co., Dept. H21 Bessemer Bldg., Pittsburgh 22, Pa.

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Thinking of—

- **changing territories**
- **expanding your territory**
- **taking on new lines—**

Check the
CLASSIFIED ADS
Your opportunity may be there.

Hermetic Trends & Service Requirements (4)

*By John J. Floreth, Vice President and Director of Services, York Div., Borg-Warner Corp.**

SUMMARIZING the history and impact of hermetic compressors on the air conditioning and refrigeration industry, this series of articles goes on to discuss modern concepts of hermetic servicing.

As illustrated in Fig. 6 these foreign material can start trouble by plugging strainers and thereby reducing system capacity. In addition, the finer particles may pass through the strainers to cause a sludging of oil or the blocking of small oil passages. Metallic particles may scar cylinder walls which increases the heat and frequently generates more free metallic particles in the system.

These foreign materials may also adhere to valve seats, eventually causing excessive wear and further overheating. If any of the materials are ferrous in nature they will be attracted magnetically to the motor to produce cutting or chafing through the winding insulation which quickly causes shunting or grounding of the motor.

Moisture is an even more deadly enemy of the hermetic system and generally enters in the form of moist air. This may have been caused by improper dehydration and evacuation before charging or air may have been permitted to enter while opening the system for service. Moisture can also enter a system from using contaminated refrigerant removed from old systems or wet service cylinders (Fig. 7).

Moisture, as shown in Fig. 8, in any hermetic system sometimes causes oil sludging, copper plating, rusting, or corrosion, but probably most seriously, it combines with the refrigerants at high temperature to form an acid which quickly eats through and breaks down motor winding insulation.

The combined attack of moisture, acid, dirt in any hermetic system produces the inevitable result, failure of the motor compressor.

(To Be Continued)

*An edited version of a talk before Refrigeration & Air Conditioning Contractors Association.

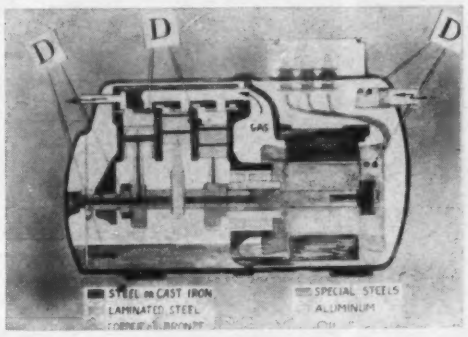

FIG. 6—Dirt and other foreign material plug strainers and start other troubles.

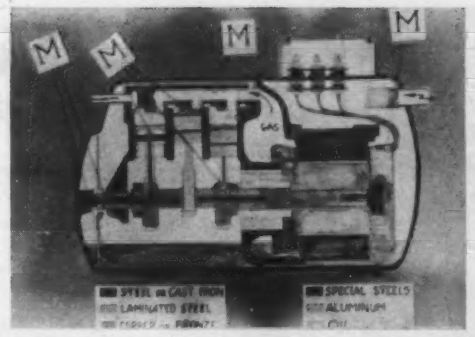

FIG. 7—Moisture is considered by many to be the worst enemy of a hermetic system.

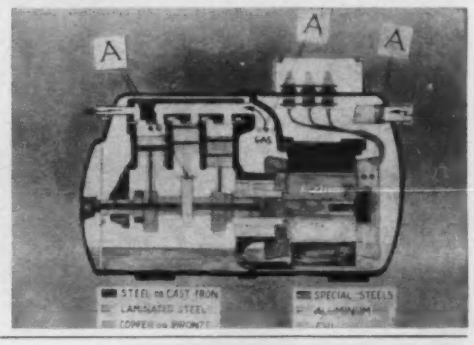

FIG. 8—Acid, one result of moisture, may result in motor-compressor failure.

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Replacement Control Packages

Imagine! Only 24 basic controls and installation packages and you're in business to handle 9 out of every 10 control calls. Installation is fast and simple . . . you've everything you need to do the job on the spot. And you know it will be done right the first time. You service more jobs per day, boost your weekly profits. Be sure to see your wholesaler about new A30 Replacements today!

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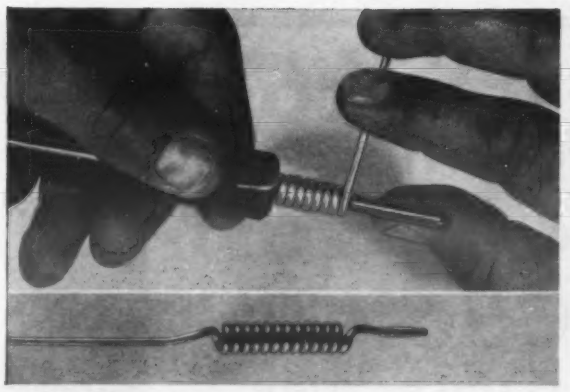
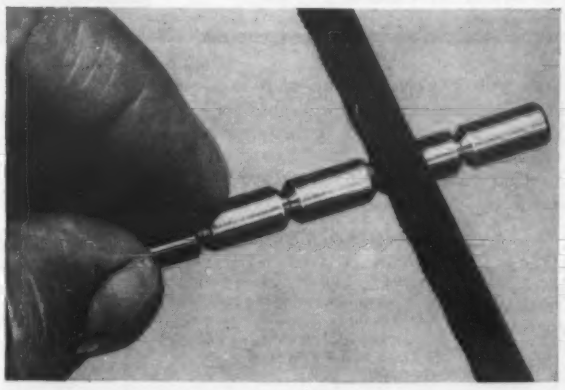


SHAPE the capillary tube (if necessary) with Ranco's new capillary forming tool available from your wholesaler.

ADJUST the mounting bracket on the new A30 Replacement for height and mounting hole spacings.



SAW dial shaft extension (unattached to control) to adapt it to any desired length and insert it in the Ranco A30 Replacement.

ADD terminal adapter clips (if necessary) and the A30 Replacement is ready for fast installation.

WITT LOW TEMP.
Defrostair COIL WITH
EXCLUSIVE PATENTED
Automatic Electric Defrost System

DEFROSTS AUTOMATICALLY
FOR LOW TEMPERATURE ROOMS, FOOD STORAGE, FOOD FREEZING, ICE CREAM STORAGE, INDUSTRIAL LOW TEMP. APPLICATIONS.

Witt exclusive Defrostair patented Heat Trap coil requires only a low cost single pole, double throw time clock for complete automatic defrosting. Easy low cost installation. Requires no re-evaporation or special plumbing. Completely automatic. Available in 21 models ranging in BTU capacities from 1400 to 44,100 at 10°T.D. Write today for complete Witt Catalog.

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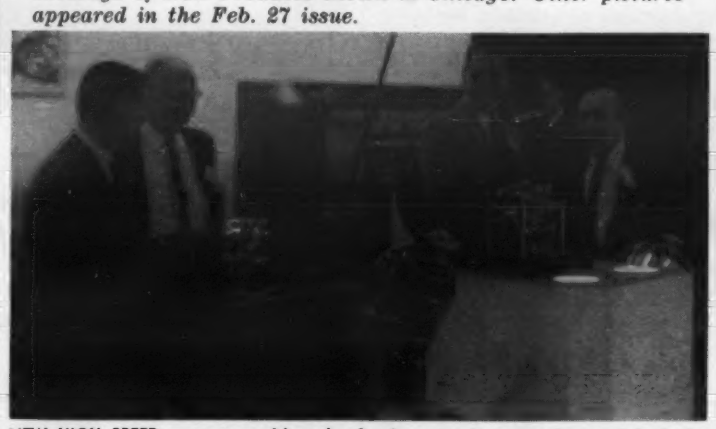
What Was New

At the ASHRAE Exposition

***NEW PRODUCTS GALORE** were on display at the 15th International Heating & Air Conditioning Exposition in Chicago. On these 2 pages the NEWS winds up its picture coverage of New Products shown in Chicago. Other pictures appeared in the Feb. 27 issue.*

NEW BURNHAM gas-fired counterflow furnace decorated with Burnham's new nameplate gets proud pats from R. T. Riordan (l.), chief air conditioning engineer, and Bill Krieger, sales representative. Gene Powers of Chicago looks on.

Many of the photographs appearing on these pages were taken by Austin Jones, Kerotest Mfg. Co., who has been photographing industry shows and other industry events since the 1930's.



NEW HIGH SPEED compressor driven by 2-pole motor in center foreground of picture draws concentrated attention in Tecumseh Products Co. display.

CALLING ATTENTION to the electric heat display of the American-Standard Air Conditioning Div. is Margie Prah, Chicago model. The display includes American-Standard's complete new "Electri-Warm" line.

DEMONSTRATION OF unit for flushing systems after a hermetic motor burnout drew interested spectators to the booth of "Freon" Products Div., E. I. du Pont de Nemours & Co., Inc.

WEATHERPROOF "Compact-Aire" year-round air conditioner for roof mounting provides 10 tons of cooling and 235,000 Btuh of heating, Harold J. Collins (l.), president of Mammoth Industries, explains to a delegation from R. Dykstra & Co. of Detroit.

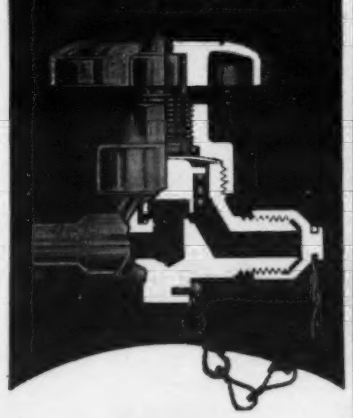
POSING BETWEEN a 4-ton blower coil and a 4-ton self-contained air conditioner introduced at the show by Laurel Products, Inc., are Donald W. Carlson (l.), Laurel sales engineer, and George Klahn, service manager. The company plans a heat pump line to be introduced later in the spring.

With 500 exhibits at the Exposition it was not reasonable to try to picture products featured in every one of them. Thus, picture coverage in the NEWS highlights those which seemed to hold most interest for our readers. Certain manufacturers may have been omitted because their products have been covered, or are being covered, in news stories.

However, it is more than likely that some newsworthy items were by-passed in the coverage, and the NEWS invites any exhibitor who feels that this happened to him, to submit a picture of the particular product exhibited which he believes to be most newsworthy.

Precision Designed for
REFRIGERATION and AIR CONDITIONING SYSTEMS

THE NEW KEROJET
CHARGE, PURGE and DRAIN
VALVE



- **Costs Less**
- **Full open height only 2¼"**
- **Seal cap with chain attached**
- **2½" diameter handwheel, colored for easy identification**

Designed for ease of operation, this new valve features compact packless diaphragms of beryllium copper and stainless steel, for maximum resistance to wear. Rugged forged brass body has integral mounting flange. Maximum operating pressure, 500 p.s.i. Maximum temperature, 200° F. Connection size inlet ⅜" solder connection—outlet ⅜" male flare. See your Kerotest wholesaler today.

Ask for No. R224X1

KEROTEST

KEROTEST MANUFACTURING CO.
2502 Liberty Avenue
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Krack low cost
AUTOMATIC
Electric Defrost Unit Coolers
FOR LOW TEMPERATURE REFRIGERATION

BUC-ED Series
for R-12 and R-22 Refrigerants
10 Models: 1, 2 or 3-fan units.
Capacities: 400 to 3600 BTU/HR/1° T.D.

Panel removed to show electric defrost distributor.

Here's why Krack can give you superior value at a low price . . . Krack has pioneered the way in electric defrosting since 1931—this experience, combined with production know-how, makes this superior value possible. Certified capacity ratings give you that extra margin of safety so you don't have to over-specify.

• Heated double drain pan with 1" insulation • Air drawn over coil • Built-in full size heat exchanger on most sizes • Electro-tin-plated copper tubes • Built-in liquid refrigerant distributor • Heavy galvannealed steel housing • Baked enamel finish.

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ADVANTAGES IN SPECIFYING KRACK EQUIPMENT
You can be sure of ratings and equipment that match the job. You gain advantage of lower bidding . . . no need to specify oversize equipment. You save installation and maintenance costs.

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MAIL COUPON FOR FREE BULLETIN BUC-ED 1159

REFRIGERATION APPLIANCES, Inc., 901 Lake St., Chicago 7, Illinois
Send free bulletin giving all technical details.

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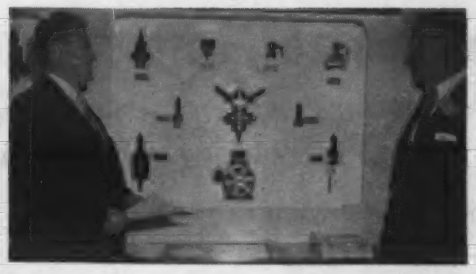
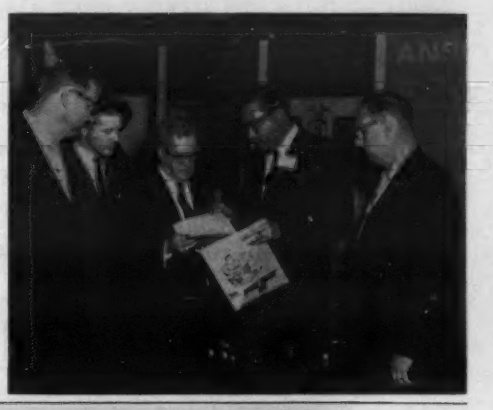
1018

NEW FINNED RADIATION for steam and hot water applications was displayed by Dunham-Bush, Inc. On display were baseboard units and finvectors.

SEE-ALL MOISTURE and liquid indicator for use on Refrigerants 12, 22, 40, and 500 is explained by Jim Mays (l.), Sporlan Valve Co. district manager in Dallas, to Fred Deady of Bryant Mfg. Co.



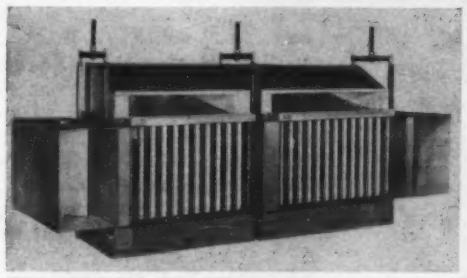
PANEL BOARD containing 10 newly-designed Hubbell Controls, valves, and adapters for refrigeration and air conditioning applications is shown by M. E. Hass (l.) of Hubbell Corp. to Charles Chidester of C & S Equipment, Los Angeles.



FAST RETURN on money for cylinder deposits for wholesalers handling "Ucon" brand of refrigerants, a plan called the "Ucon Refrigerant Speed-Draft Return System for Empty Deposit Cylinders" is explained to S. N. Mohler, R. E. Thompson Supply Co., St. Louis (center), in the display area of Ansul Chemical Co., national distributor for Ucon. Others in the photograph (l. to r.) include Glenn Iams, Charles Gray, and John Bopp.

DROPPING INTO the Henry Valve Co. booth to see the Henry "Dri-Vue" moisture-liquid indicator, Richard Dopp of Bell & Gossett Co. gets pinned by Dorothy Jason.

NEW HIGH PRESSURE air distribution system, adapted from successful application on ships and using specially designed blower having backward curved blades, operates at velocities up to 6,000 fpm. It was featured in exhibit of Drayer-Hanson Div. of Hi-Press Air Conditioning of America, Inc. Also shown were D-H units for central and multi-zone air conditioning systems.



FACTORY BUILT by-pass section with adjustable damper for use in air conditioning installations is an accessory of the new sectional gas duct furnace displayed by Hastings Air Control, Inc.

AIR CONDITIONING SYSTEMS ENJOY
A New Efficiency and Economy With

AIR-CON EMULSION
SAND-BANUM

The Concentrated Liquid Treatment
For
AIR CONDITIONING SYSTEMS
and
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(Where Water Is Recirculated)

REMOVES AND PREVENTS Rust and Scale Formation and Corrosion

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Very small quantities disperse into millions of minute particles, suspended in water, and attract to themselves all foreign matter, holding it in suspension. Colloidal action causes spongy disintegration of scale, which is removed through bleedoff at a low point. Further, a microscopic film is deposited on all metal surfaces protecting them against corrosion.

Write for literature. Available direct or through distributors. AIR-CON CONTAINS NO CHROMATES—NO ACIDS!

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AMERICAN SAND-BANUM COMPANY, Inc.
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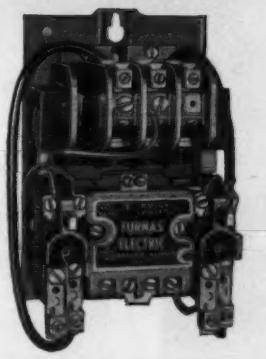
WATER TREATING CHEMICALS • RUST PREVENTIVE COATINGS
DIESEL AND FUEL OIL TREATMENTS
Agenies in Principal Cities

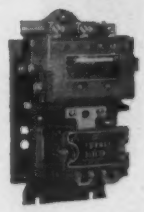
new CURRENT RATED STARTERS



Through 53 amps, rated in full load and locked rotor. Can be used for both 220 volts and 440 volts.

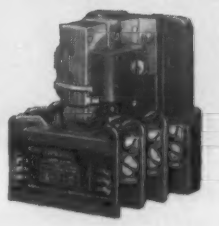
new CURRENT RATED CONTACTORS THROUGH 90 AMPS.

Furnas Electric offers a complete line of current rated contactors through 90 amps meeting requirements of the Air Conditioning and Refrigeration Industry.



90 amperes

Contactors through 40 amps, 2, 3 and 4 pole with interchangeable mounting dimensions are available for compressor and electrical heating applications.



40 amperes

2 and 3 pole, 25 amp contactors are used for unattended domestic and commercial applications, and for resistance heating applications.

25 amperes

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A95

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BATAVIA, ILLINOIS
SALES REPRESENTATIVES IN ALL PRINCIPAL CITIES

Distributor's Prize Contest

How Detroit Firm Stimulated a Particular Product At the Local Level with Dealer Incentive Program

DETROIT—How does a heating and air conditioning wholesaler conduct a prize contest to stimulate sales for a particular product on the local level?

Star Steel Co., Detroit heating and air conditioning distributor, recently worked out the solution to such a problem with a successful dealer incentive promotion.

It all started last summer when Star Steel Supply mapped out a fall sales program on "NoVent" and "Constant Comfort" gas heaters. The firm approached the manufacturer, Suburban Appliance Co., with a dealer incentive plan that would be paid for out of co-op funds. This was quickly approved and things got under way.

The promotion consists of a prize contest that was limited to accredited heating dealers in the Star Steel Supply territory which includes most of southeastern Michigan.

Main 'Bait' Was Trip to Miami

The main "bait" of the contest was an all-expense, 7-day trip to Miami for two people. Winners would be flown to Florida by Delta Royal Jet and stay at the luxury Americana hotel and receive $200 in cash for spending money. In addition, they would have private use of a 42-ft ocean-going cruiser captained by a fisherman known for his huge catches.

This grand prize was to be awarded to the dealer with the highest volume of NoVent and Constant Comfort unit purchases during the four-month period of the contest.

To stimulate greater interest and participation among smaller buyers as well as large, it was decided to award three consolation prizes in a way that would give all dealers an equal opportunity.

JOE CALVERLEY presents Star-NoVent grand prize award to Mr. and Mrs. Al Richardson. Mr. Richardson is owner of Richardson's Heating Co., Farmington, Mich.

These consisted of a TV set and two kitchen appliances. Winners were to selected through a drawing to be held at the offices of Star Steel Supply. All dealers would receive one chance for each unit purchased.

The contest was promoted by mail and through the personal contacts of the Star Steel salesmen. Five mailings were used. These consisted of an announcement in the form of a bulletin which was followed up by a letter and three postcards. These were sent out to a screened list of approximately 1,700 heating dealers which included both customers and prospects.

The contest was timed to open with the beginning of the fall heating season. Things got off to a fine start. It was a frequent topic of conversation between dealers and salesmen. It also generated much interest in No-Vent Heaters and many new accounts were opened.

Dealer Training Session Conducted by Mfr.

A dealer training session was conducted by the manufacturer and many dealers started to use the NoVent floor display which was tied in with the promotion. Star Steel salesmen made direct customer contacts with their dealers to help promote new sales.

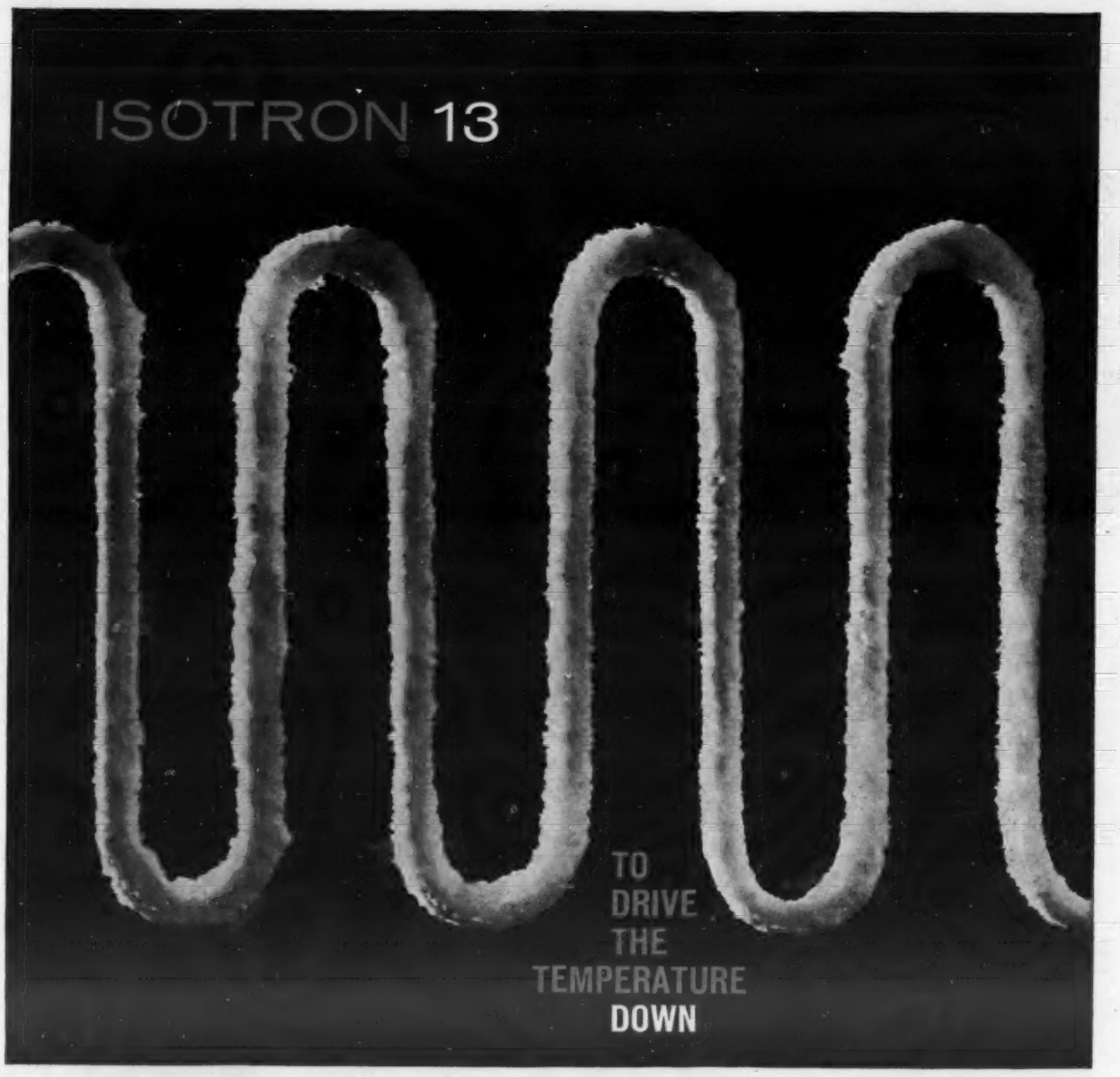
As NoVent is a spot heater designed primarily for auxiliary use, many dealers found their present customers to be their best market. Applications included porches, breezeways, attics, garages, basements, recreation areas, and added rooms.

The incentive contest finally ended with a pleasant conclusion in February when Al Richardson, a long-time No-Vent booster, and owner of Richardson's Heating Co., Farmington, Mich., won the grand prize. It wasn't a walkaway, though, as the race was closely contested right to the end. The Richardson account was handled through Joe Calverley of Denny's Heating Supply Co., subdistributor of Star Steel Supply. The other winners in the contest were Minneapolis Heating Service, Fred's Warm Air Heating Co., and Tri Heating Service Co., all located in the Detroit area.

Trip To Be a Family Affair

An interesting sidelight of the contest occurred at the presentation of the awards. While Mr. and Mrs. Al Richardson were tickled to win the grand prize, they didn't know how they could make the trip to Miami as scheduled. They explained it would be necessary to leave their five young children at home and that was something they didn't care to do.

But things came to a happy ending when Jerry Barsky, secretary of Star Steel Supply, made some quick rearrangements. As a result, all seven of the Richardson family will motor to Miami in June when school lets out and stay in motels of their own choice during the trip.



Many applications in the fast-moving field of cryogenics... especially those calling for low temperatures around −100° F. . . . can now take advantage of the greater economy of ISOTRON 13. With a boiling point at atmospheric pressure of −114.6° F., ISOTRON 13 can be used in two- and three-stage systems with ISOTRON 12 (b.p. −21.6° F.) and ISOTRON 22 (b.p. −41.4° F.).

Mechanical refrigeration with ISOTRON 13 frequently costs less than cooling with cryogenic gases like nitrogen and oxygen...and permits lower equipment cost than systems using other gases. The higher latent heat of ISOTRON 13 permits more compact equipment design.

ISOTRON 13, like ISOTRON 11, 12, 22, 113 and 114, is commercially available from conveniently located stocks across the country. Shipments are made in 5-, 23-, and 80-pound cylinders. Pennsalt will be glad to supply technical data and engineering assistance in handling and storing ISOTRON 13. Write for information.

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To Train a Serviceman

Keep Up To Date . . . Have Manufacturer's Representative Outline Engineering Features . . . Make Manual Reading Compulsory Watch Performance Records . . . Match Veteran With Apprentice

NEW ORLEANS — How Engineering & Refrigeration, Inc. of Jersey City, N. J., trains its mechanics and keeps them informed was described by R. J. Wischusen, company president, at the NCRSA convention.

The job is done by an administrative and supervisory staff of five men who have a total of 125 years' experience in practical mechanics, he noted.

"Our first step in training and keeping up to date," Wischusen related, "is through service meetings which all personnel are compelled to attend.

"When a new product is to be discussed, a field engineer representing the manufacturer is always present. He first outlines the engineering behind the product and its many features. Then, if you please, he points out possible trouble spots that may be encountered.

"This procedure of course is a must on any new items added to the lines that we handle, or component part changes that would affect the job in the field.

"This we feel is necessary so that our entire personnel will familiarize themselves with the added features and not have to start reading wiring diagrams or installation data on the job.

"This always creates a question in the customer's mind, especially if some enterprising mechanic explains to the customer, 'This is something new and I am not fully familiar with how it's installed.' The customer immediately feels he is being used as a guinea pig.

"Our training program is primarily carried out through meetings plus actual on-the-job training of apprentices or newly hired mechanics working hand in hand with our lead men.

PRACTICAL SERVICE MEETINGS

"We believe that all our mechanics as well as apprentices have gained considerable knowledge through practical service meetings," Wischusen said. Practical demonstrations and explanations of each operation by experts in their field clear up many questions in the mind of a mechanic or apprentice that he may otherwise be hesitant to bring out, he added.

Wischusen said each mechanic and apprentice is furnished with a bound manual. "Through the office he is supplied with all data available on every product we sell or install. He is required to read this data carefully and file it in the manual, so that it is readily available for quick reference.

"We can rightfully expect that a well-trained mechanic who has pride in his own capabilities will study such material during his off hours in order to be conversant with the best method of handling as recommended by the manufacturer.

"It's only natural also that an apprentice striving for the knowledge to help further his ambitions will study it very carefully. He is advised when given such material to consult with his supervisor to be sure he has a clear understanding of its application when he is receiving his practical training.

SERVICE RECORDS REVEAL MECHANICS' SHORTCOMINGS

"We keep a very detailed service record of every unit we install and service. An analysis of all installation and service reports will quickly show if a mechanic has a shortcoming in respect to one or more portions of his training.

"He may not be completely familiar with detailed control wiring. After a call-back or two on problems that he has handled indicates that he did a poor job of diagnosis, he is brought in and our service manager will show him how he missed the boat on the calls in question.

"Our supervisory personnel try to keep abreast of all new methods used in our industry, either developed through the use of new tools or equipment or through the ingenious design of a fellow mechanic.

When a method is developed, applied and found to be an advisable change in our method, it is thoroughly discussed with all mechanics and then adopted as a standard procedure or technique to afford economy and yet maintain the quality of our job.

"Our mechanics must be trained to be highly skilled in all allied trades that go to make up a typical installation. They must be capable of instructing carpenters, plumbers, electricians, etc., to allow for a smooth running job execution.

"We familiarize our personnel with wiring diagrams, piping layouts, etc., that may be considered 'typical.' These drawings are primarily based on manufacturers' recommendations, but tying in other controls that we feel necessary for, perhaps, a more trouble-free operation. Such diagrams in our mechanic's possession allow him to meet any job situation that may arise where an architect may have incorporated our drawing into a job electric wiring schematic.

"It certainly helps in minimizing the time our man takes in explaining wiring diagrams to an electrician on the job and the eventual ringing out of a system before it is charged and started.

"One of the leading attributes that we try to build into the lead men in our organization is a 'cooperative pleasing attitude.'

"When a mechanic has been trained in the procedures of the company, has a thorough understanding of what the company stands for and its policies, he, together with a cooperative Pleasing Attitude, is an invaluable asset. Without this knowledge and attitude he can be the world's best refrigeration mechanic but his abilities will wear thin with time.

"We endeavor through our supervisors to constantly remind our outside men of the quality workmanship we expect, of our responsibilities not only to the company, but also to our customers.

When you tap a line . . .
Stop fumbling
with loose parts

Use a NEW Imperial
Hermetic Piercing Valve

No loose parts. No bolts or screws required to adapt this unique C-clamp type piercing valve to a line. Just slip it over the tube, tighten nut, turn set-screw and pierce the tube. It's quick and economical. Tap the line at any point for charging, testing or purging hermetically sealed units. Handles: 3/16", 1/4", 5/16" and 3/8" O.D. Ask for Imperial No. 342-C Hermetic Piercing Valve.

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TECH CENTER

by

FRANK J. VERSAGI

Adhesive Bonded Tube Joints

H. J. LOEHLEIN and E. D. GARDNER, both of Reynolds Metals Co., have prepared this discussion for Tech Center. Adhesive bonded joints are being discussed more frequently than ever. The NEWS feels it is time for a progress report.

Here it is.

1. Are They Practical?

After several years of experimentation and development of bondiing aluminum tube joints, Reynolds Metals Co. says, "Yes."

All aluminum air conditioner coils with adhesive bonded return bends have been on field test over two years without adhesive failure or indication of deterioration.

The use of 100% solids, one-part epoxies which do not require fluxes simplifies the joining of multiple tube-joint assemblies of like or dissimilar metals. Being inert, the hazard of galvanic corrosion between tube metal and bonding material is eliminated.

Adhesive bonded joints cost less than conventional brazed or soldered joints where existing furnace dehydration facilities can be used for adhesive curing.

One logical area of application of adhesives is in fin-and-tube heat exchangers which incorporate numerous return bends. Many coil manufacturers have considered aluminum tubing in lieu of copper for evaporators and condensers due to potential material cost savings, but have been skeptical of using the metal due to the corrosive active of fluxes required in conventional joint bonding.

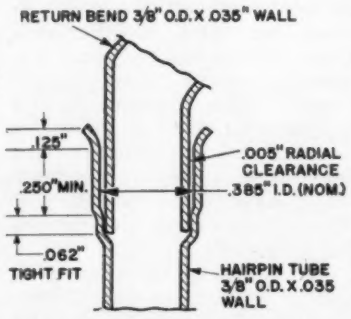


FIG. 1—Joint design of a ⅜-in. o.d. tube with .035-in. wall.

Adhesives eliminate the flux requirement and facilitate the use of aluminum tubes with aluminum fins, thereby opening the door to reduced coil costs.

Another potential application is the joining of copper-aluminum tubes where conventional flash butt welding is used today. Adhesives could eliminate one or in some cases two assembly joints.

2. What Adhesives?

Reynolds has concentrated its development efforts to one-part, heat-cured epoxies for bonding tube joints in refrigeration circuits. Most work has been done with Minnesota Mining & Mfg. epoxy EC-1595 **which has proven to be compatible with R-12 and R-22.**

The adhesive requires no mixing and has a long pot life at room temperature. A storage temperature of under 45°F is recommended for extending storage periods. Following are typical characteristics* of EC-1595:

Base: Modified Epoxy Resin
Solvent: None
Consistency: Flowable paste
Color: White
Net Weight: 10.0 ± 0.2 lbs/gal.
Flow Temperature: 100°
Cure Initiation Temperature: 325 - 350°
Shear Strength at 73.5° ± 2°— 2,600 psi
Shear Strength at 300° ± 2°— 2,550 psi

3. How Are Joints Made?

A method of adhesive application has been developed which lends itself to the bonding of return bends in aluminum fin-and-tube heat exchangers in mass production. The coils can be fabricated in the same manner as most copper tube coils; however, the ends of the hairpins are formed as illustrated in Fig. 1. The joint design of a ⅜-in. o.d. tube with .035-in. wall is shown.

The .005-in. nominal radial clearance between the return bend and hairpin provides the cavity for adhesive fill.

The hairpin-end forming can be done at the same time as the tubes are expanded with gang mandrels and would not require an additional operation.

After expansion, the coil assembly must be solvent cleaned to remove all traces of lubricating oils or foreign materials from the hairpin tubes. Mechanical abrasion improves the bond characteristics. Aluminum return bends can be caustic etched and deoxidized or solvent-cleaned.

The cup-shaped ends of the hairpin tubes provide receptacles in which the adhesive is applied. With the return bends in place and tapped to seal the hairpin openings, and with the coil in an upright position, adhesive is forced into each bell. It can be applied on one side of the bell only. Fig. 2 shows the application of adhesive with a single nozzle air-pressure gun.

*Some of the above adhesive characteristics were taken from 3M Company Technical Data Sheet, Issue #3 covering EC-1595.

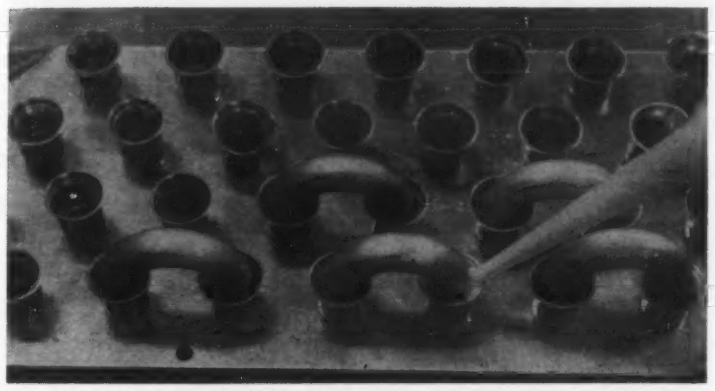


FIG. 2—Adhesive is applied with a single-nozzle air pressure gun. A multiple-nozzle metering gun would increase rate of production.

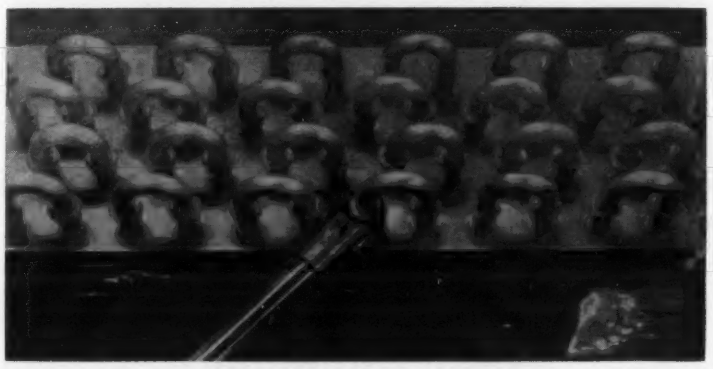


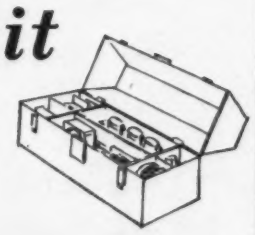
FIG. 3—A simple soldering iron with a modified head can be used to supply curing heat during field repairs.

A multiple-nozzle metering gun would increase production speed. A ⅜-in. o.d. tube joint requires less than 0.3 grams of adhesive.

The coil is now ready for the adhesive-curing process which can be divided into two stages: (1) an adhesive-flow stage and (2) a final-cure stage. A conveyor furnace is ideal for this process as it facilitates a continuous flow of production.

The first or adhesive-flow stage is accomplished at a temperature well below the cure initiation temperature of 325-350°. Reynolds has used a tem-

MASTER of the service kit



Field comments confirm our feeling that anything and everything worth having in a refrigeration thermometer has been designed into the Marsh "Serviceman"—truly master of all it surveys.

Users appreciate such royal Marsh features as the easy reeling five foot tubing with conveniently positioned bulb clip; spiral spring to guard against tube crimp; permanently leak tight bourdon tube; easily accessible "Recalibrator" screw; and the Marsh heritage for accuracy and durability.

And the Serviceman thermometer has looks, too! The easy-to-read precision dial also indicates Refrigerant-12 and -22 pressures on contrasting color scales and is regally set-off by a bright chrome bezel on an iridescent gun metal case—fully protected by a scratch-proof, forever clear Lucite crystal.

Available in two ranges: —10 to 100° F. and —40 to 65° F. The De Luxe Serviceman thermometer is the *surest* way to test thermostats, brine tanks and refrigerators. Put one in *your* service kit today!

Also available in Standard Model with single scale.

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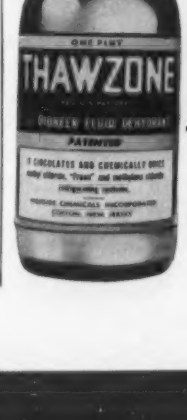
- eliminates freeze-ups.
- minimizes corrosion and copper plating.
- destroys trouble-causing moisture, and *prevents its return.*
- helps keep expansion valves free of sludge and rust.
- scavenges out oxygen.

Economical! Just ⅛ ounce treats a pound of refrigerant. Ask your supplier for Thawzone and the Free Thawzone Service manual.



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TWO OTHER REFRIGERATION AIDS FOR FINER, FASTER SERVICE

TRACE . . . the simple, fast way to pinpoint refrigerant leaks . . . a positive leak tag.

Leak Lock . . . the joint sealer engineered for refrigeration use.

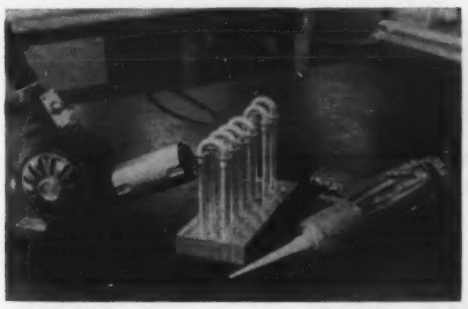

FIG. 4—Air heat gun curing test tube joints and adhesive applicator.

perature of approximately 225° and a time of 5-10 minutes. As the stage name indicates, the adhesive is very fluid at 225° and flows into the .005-in. cavities provided in the hairpins.

The second or cure stage is accomplished with a furnace temperature of 400° and a time of 5-25 minutes. The exact time of each stage depends upon the amount of air flow in the furnace and the time it takes the entire coil assembly to reach the required temperatures.

The adhesive solidifies at the elevated cure temperature which permits the use of a dry air blast through the tubes as the coils leave the furnace to effect dehydration. Being 100% solids, the adhesive gives off no volatile by-products during the cure cycle.

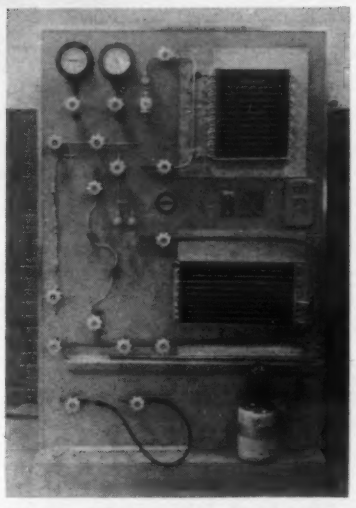

FIG. 5—Adhesive joint test apparatus with adhesive bonded return bends on evaporator and condenser plus individual tube joints in high and low sides of refrigeration circuit.

4. How Can Joints Be Repaired?

The repair of a joint is done in the same general manner as the initial cure. Should a leak occur during assembly, the hairpin bell should be recleaned with solvent. The design of the bell permits the addition of adhesive over that originally applied. The entire coil can then be routed through the cure process a second time.

Repair of adhesive joints in the field represents a different problem. Since it may be inconvenient or impractical to cure a joint with the hairpin bells in an upright position, a thixotropic or non-flow adhesive is recommended. Minnesota Mining & Mfg. epoxy EC-1596 has been used successfully in laboratory repairing.

After the joint is solvent-cleaned, this epoxy must be buttered on or forced into the hairpin bell. For curing, a remote heat source which concentrates heat in the local area of repair is recommended.

One approach is with a simple soldering iron with a modified head as shown in Fig. 3. A standard 100-watt iron was used with a 75-volt potential to provide a 400° curing temperature.

Holes drilled through cured-adhesive joints have been repaired with a 15-minute cure cycle by this method.

Another approach is with a hairdryer type of heater which supplies a directed blast of 400° air.

Curing with a torch flame has been done but is not recommended as there is a tendency to overheat and char the adhesive.

Summary

Only one adhesive and one method of application have been discussed in this article. Other epoxies can be used for good joint bonds and other application procedures will be required where methods of heat exchanger fabrication are different from the one described. The great number of epoxies now commercially available offer a wide range of physical characteristics and cure cycles to meet individual requirements.

The ease of application, non-fluxing requirement, inertness, and high strengths of epoxies are ideal characteristics for bonding tubes of like or dissimilar metals in refrigeration circuits.

Though most work to date has been on a laboratory scale, it is highly probable that general industry acceptance and extended usage of adhesives in this application will be accomplished within the next two years.

Johnson Furnace Names Hildreth to Engineering Post

CLEVELAND — Thomas L. Hildreth has recently joined the Engineering Dept. of The Johnson Furnace Co.

T. L. Hildreth

He will have charge of design and development of a complete new line of "Air-Ease" cooling equipment and its application to the Air-Ease combined heating and cooling units which will be ready for the 1961 cooling season.

Hildreth was formerly with the Coolerator Div. of McGraw-Edison Co., Perfection Industries Div. of Hupp Corp., and Viking Mfg. Corp.

Davey Sales To Hold Product Show On March 17-18

AKRON, Ohio — An educational and product show will be held March 17-18 at the Chesterfield hotel in Cuyahoga Falls, Ohio, under sponsorship of Davey Sales Co., local refrigeration and air conditioning supplies wholesaler.

Over 30 manufacturers will display their products at this show, it was reported. Invitations have been sent to all Davey Sales customers and prospects in the eastern Ohio market. A series of direct mail pieces is scheduled to keep them aware of the show.

This is the first time that a show of this type has been tried by Davey Sales. In the past, one manufacturer would be invited to put on a meeting.

E. H. Davey, president of the firm, commented: "Too often a person active in this business cannot afford to take the time to attend trade shows hundreds of miles away from his home. Therefore we have decided to bring the new products and new techniques to him.

"We have invited many of the leading manufacturers in our industry to display their equipment at this show. In addition, some of these manufacturers' top technical people will be here to explain new methods of application and service."

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

New Flexible Unicellular Thermal Insulation Material Specs Issued

NEW YORK CITY—A new specification for flexible unicellular thermal insulation material in both sheet and tube form has been approved and issued by the manufacturers of the material.

Copies are available without charge from the manufacturers listed below and from Arthur L. Faubel, acting secretary of the Unicellular Insulation Manufacturers Task Force, Room 735, 342 Madison Ave., New York 17, N. Y. The new specification covers the material in both sheet and tube form.

For the manufacturers the Task Force has also submitted to the General Services Administration in Washington an identical specification for approval as a Federal Specification for the material.

It is expected that this proposed Federal Specification will have been processed by early spring whereupon copies will probably be available from GSA in Washington.

Both specifications are the result of an extended testing program at the Research Center of one of the manufacturers with check testing at the laboratories of some of the other manufacturers, it was stated. The manufacturers who participated in the preparation of the new specification included Armstrong Cork Co.; B. F. Goodrich Co.; Presstite Div., American-Marietta Co.; and Rubatex Div., Great American Industries, Inc.

— *Now Available* —

"AUTOMATIC REFRIGERATION"

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A modern review of refrigeration theory and application —Weather data from all over the world—International Trade Names—Refrigerant Tables in English and metric units—World-wide Bibliography.

"Professor Anderson has come as near as any writer to writing a technical book which will appeal to both the slightly and the highly knowledgeable."

—*Frank J. Versagi,*
NEWS *Technical Editor*

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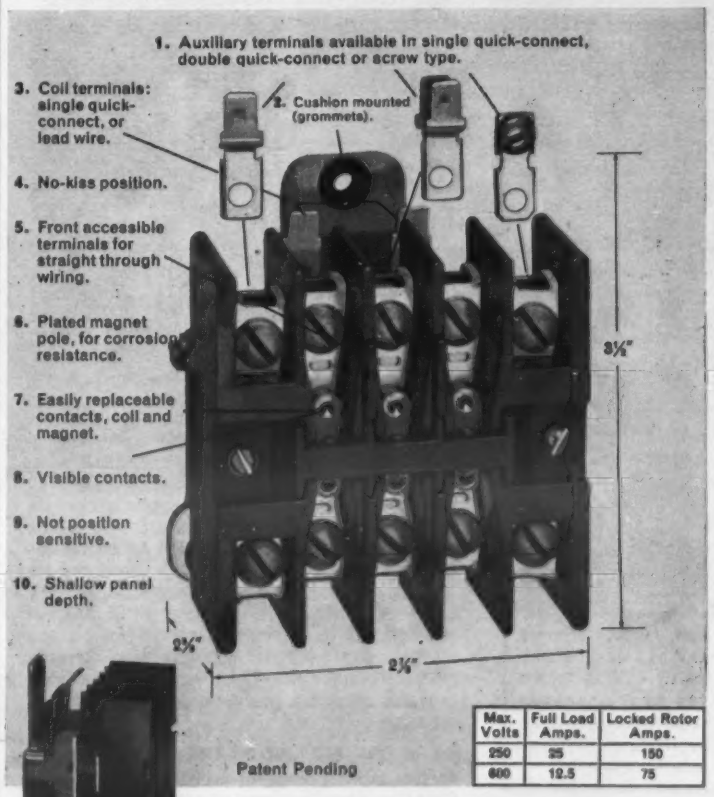
NEW RBM
25 AMP — 2 AND 3 POLE
CONTACTOR
TYPE 85
DESIGNED FOR UL AND CSA LISTING

Simplifies panel circuitry — helps eliminate terminal boards — cuts wiring costs.

Here is the first air conditioning contactor designed so auxiliary terminals can be added to power wiring terminals. Also, extra dummy wiring terminals can be added when required. Such flexibility can help eliminate terminal boards, lower wiring costs, and provide more versatile and simplified panel circuitry. Auxiliary terminals can be #8 screw or ¼" single or double quick-connect. Dummy terminals are #10 screw with or without the auxiliary terminals. Consult your application engineer or write for Bulletin C16.


1. Auxiliary terminals available in single quick-connect, double quick-connect or screw type.
2. Cushion mounted (grommets).
3. Coil terminals: single quick-connect, or lead wire.
4. No-kiss position.
5. Front accessible terminals for straight through wiring.
6. Plated magnet pole, for corrosion resistance.
7. Easily replaceable contacts, coil and magnet.
8. Visible contacts.
9. Not position sensitive.
10. Shallow panel depth.
3⅛"
2⅜"
2⅛"
Patent Pending

Max. Volts	Full Load Amps.	Locked Rotor Amps.
250	25	150
600	12.5	75

ONLY RBM HAS ENGINEERED A COMPLETE FAMILY OF AIR CONDITIONING CONTROLS

TYPE C-30, C-40, C-50 CONTACTORS Write for Bulletin 1070

TYPE 60 CONTROLLER Write for Bulletin C-11

TYPE 75 POWER RELAY Write for Bulletin 1030.

SERIES 129000 SHUNT TYPE RELAY—SPNO, SPNC OR NO-NC Write for Bulletin 1010-A.

GENERAL PURPOSE RELAY Write for Bulletin 1060

SERIES 128000 POTENTIAL STARTING RELAYS Write for Bulletin 1010-A

BIMETAL TIME DELAY RELAYS AND THERMOSTATIC DEVICES Write for Bulletin C-15

ENCLOSED BANTAM RELAY TYPES 83 & 84 Write for Bulletin 1080

RBM CONTROLS DIVISION
ESSEX WIRE CORPORATION, LOGANSPORT, INDIANA
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Termed 'First Practical' Method

General Chemical Develops Field Test To Determine Acidity In Burned Out Systems

By Frank J. Versagi

CHICAGO — What has been termed "the first practical field test to determine the degree of acidity in burned out hermetic systems" was demonstrated during the 15th International Heating & Air Conditioning Exposition by Allied Chemical's General Chemical Div., producer of "Genetron" refrigerants.

The test, designed for field application by servicemen, consists of taking a sample from the system during flushing with Refrigerant-11, then running a simple test for acid content on the sample.

If the sample is taken before the defective compressor is replaced, it allows the serviceman to determine whether a fast, medium, or slow burn took place. (The longer the burnout took, the more extensive will be the contamination.)

Should the sample reveal a fast burnout had occurred and that contamination had not passed through the system from the compressor, cleanup can be accomplished by the use of liquid line and suction line driers, the firm suggests.

When the sample shows a medium burn has taken place, it becomes necessary to flush the system with Refrigerant-11, and General has devevloped a technique for this cleanout, using a pressurized cylinder of R-11. The company claims to be the first producer to offer R-11 in pressurized cylinders expressly designed for this purpose.

When contamination is severe, as from a slow burnout, the company recommends pumping in the traditional manner using R-11 as the solvent.

In the last two cases, samples taken from time to time will allow the serviceman to know for sure when he has rid the system of acid.

Briefly, here is the test:

1. The sample is collected as the system is being flushed with R-11. (This solution of R-11 will contain a valid reflection of the amount of acid in the unit.)

2. A measured portion of the sample is poured into a tube.

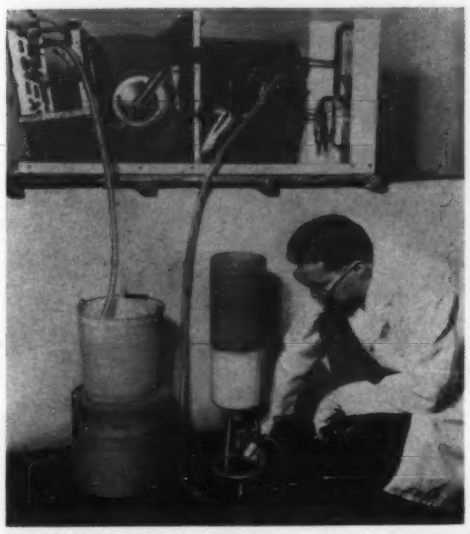
3. An equal volume of "Solution 1" is added.

4. The mixture is poured into another flask to assure thorough mixing.

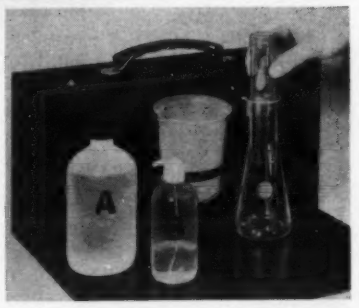
5. Exactly five drops of "Solution 2" are added. If these five drops turn the solution a permanent pink, acid content of the system is below the danger point. (If the sample is the first one, it indicates the two-drier approach to clean out; if the sample is taken during a flushout of a more contaminated system, the indication is that the system is clean enough to put back in operation.)

6. If the first five drops do not turn the solution a permanent pink, 15 drops more are added. If they turn the solution a pink, the system needs cleaning, probably by the pressurized cylinder method.

7. If the total of 20 drops do not turn the solution pink, the system is severely contaminated and needs a thorough cleaning.



GENERAL CHEMICAL's new clean-out procedure permits mildly contaminated systems to be cleaned without pumping by flushing with "Genetron" 11 solvent from specially prepared cylinders. "Refrigerant 11 has become a preferred solvent in the industry because it is safe to handle, cleans out acids and moisture, and loosens and removes solids."



GENERAL CHEMICAL's field test to determine degree of acidity in burned out hermetic systems is performed with this handy, portable kit.

Field test kits and the new pressurized cylinders of "Genetron"-11 for flushing mildly contaminated systems will be available from wholesalers about March 15, the company stated. Within the next several weeks, General Chemical intends to demonstrate the cleanup and testing procedures in many cities in cooperation with wholesalers.

John Spence, educational director for Refrigeration Service Engineers Society, told the NEWS he is highly pleased with the newly-developed field test. "For the first time, there is something besides guesswork with which the serviceman can determine how well he has cleaned up after a burnout."

Proposed Presentation Schedule for New Burnout Test

Demonstrations by D. C. Anderson

Jacksonville, Fla., Feb. 27; Orlando, Fla., Feb. 28; Miami, Fla., March 1; Tampa, Fla., March 3; Birmingham, Ala., March 6; Nashville, Tenn., March 7; Atlanta, March 8; Columbia, S. C., March 10; Pittsburgh, March 13.

Cleveland, March 15; Akron, Ohio, March 17-18; Charlotte, N. C., March 20; Greensboro, N. C., March 21; Richmond, Va., March 22; Norfolk, Va., March 23; Washington, D. C., March 24; Baltimore, March 27; Philadelphia, March 28.

Demonstrations by W. M. Smith

Des Moines, Iowa, Feb. 27; Omaha, Neb., Feb. 28; Grand Island, Neb., March 1; Sioux City, Iowa, March 2; Kansas City, Mo., March 6; Wichita, Kan., March 7; Oklahoma City, March 8; Fort worth, Texas, March 9; Dallas, March 10.

San Antonio, March 13; Houston, Texas, March 14; New Orleans, March 16; Memphis, March 20; St. Louis, March 21; Indianapolis, March 22; Louisville, Ky., March 23; Cincinnati, March 24; Dayton, March 27.

Columbus, Ohio, March 28; Detroit, March 29; Chicago, April 4-5; Phoenix, Ariz., April 10; San Diego, Calif., April 12; Los Angeles, April 13-14; San Francisco, April 17-18; Portland, Ore., April 20; Seattle, April 21.

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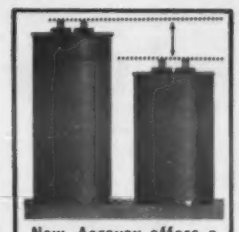

Now, Aerovox offers a savings of approximately 15% in volume for space-savings requirements with no sacrifice in performance or reliability.

*CAPACI-BILITY
An Aerovox characteristic. Capability to design, develop and manufacture capacitors to best meet customers' requirements.

Prompt delivery schedules in production quantities.

Designed to meet today's needs for space-saving, Aerovox Motor-Run Capacitors offer a new high in performance with a new low in height. These units, available in voltage ratings of 165, 236, 370, 440 and 660 VAC in a wide range of capacitances, are furnished in drawn metal cases with double-lock seams and are hermetically sealed for continuous duty operation. Aerovox Motor-Run Capacitors are supplied with double blade universal terminals. New one-piece dual cup bushings meet all UL physical requirements . . . prevent terminal twisting and increase assembly strength. Exclusive Aerovox "Weatherguard"† 80-147 UL approved case finish provides maximum protection against rust and corrosion.

AEROVOX MOTOR-START CAPACITORS

Aerovox offers a complete line of top-quality Motor-Start Capacitors featuring an exclusive electrolytic formula rigidly controlled for purity to assure dependable performance and long service life. Vibration protection against broken internal connections is assured by special sealing compound used to imbed section in case. Positive seal guards against adverse environmental conditions. Phenolic and aluminum cases available.

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AEROVOX CORPORATION

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IS HIGH / LOW LINE VOLTAGE GIVING YOU SERVICE PROBLEMS?

Never understimate the trouble that excessive voltage or low voltage can cause to electrical equipment and devices. Check the voltage every time you make a new installation, every time you make a service call. And, if voltage is more than ±5% of normal, recommend and install an Acme Electric Boost and Buck Transformer to correct voltage to the normal required by the connected load.

● AVOID BURN-OUTS BY CORRECTING EXCESSIVE VOLTAGE

High line voltage makes motors heat faster, deteriorates insulation, causes motors to burn out; shortens life of electronic tubes *(including tv picture tubes)* and incandescent lamps; increases operating cost per hour. An Acme Electric transformer connected to buck a high line-voltage can correct these problems.

● GET MAXIMUM PERFORMANCE BY CORRECTING UNDERVOLTAGE

Motors fail to reach their maximum torque when line-voltage is much below normal, and often continue to operate on starting windings until they heat up and burn out; electronic tubes fail to function properly; fluorescent and incandescent lamps are reduced in light output. An Acme Electric voltage boosting transformer can correct these conditions and save money.

● SEND FOR THIS BULLETIN

Boost and Buck Transformer Bulletin 5A3 contains 15 valuable reference charts, and tabulations providing an instantaneous method of determining size of transformer needed for any load under any off standard voltage condition. Write for your copy.

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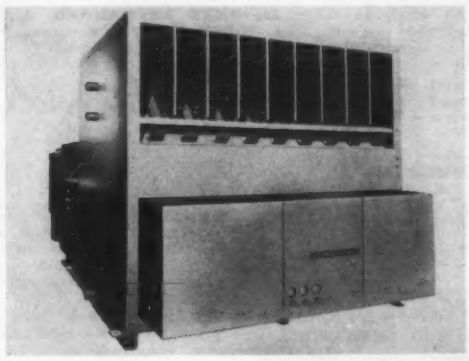
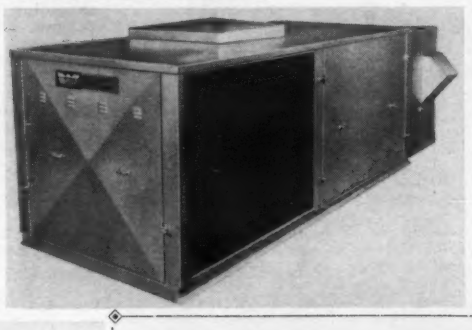


"MULTI-TEMP" CMC series package multizones comprise three models ranging from 20 to 35 tons' cooling capacity, choice of heating controls and individual zone control.



"ROOFAIR" roof-mounted air conditioner is made in six models with cooling capacity range from 5 to 30 tons with gas, oil, or steam heat.

full choice heating coils having adequate heating zone controls for heating, cooling, or a combination of both," the company said.

"One of the engineering and application features of this unit is its ability to handle any load requirement from 0 to 100% of the total system capacity. Filter boxes, mixing boxes, humidifiers, and other accessory equipment are also available."

The basic WRA Roofair roof-mounted air conditioner is designed for cooling and dehumidification. Combination units are also available with gas, oil, or steam heat for year-round conditioning.

This series includes six models with a cooling capacity range of from 5 to 35 tons with standard heating ratings matched to the unit cooling capacities. Larger heating components are optional.

Feature of Roofair units stressed is their self-contained packages shipped as single pieces completely factory wired, piped, and charged with refrigerant. A specially engineered single air distribution chamber is furnished for standard rooftop mounting application to provide controlled supply and return air distribution from the unit directly to the conditioned space. The unit is adaptable also for ductwork.

The new line of ventilating fans is called the "Series 600 Centriflow" fans. "Uniweld" construction makes all-welded housing standard on all fans regardless of class. A new wheel design with backwardly inclined blades "assures smooth and unrestricted air flow for high efficiency and quiet operation."

Worthington also announced various new models and sizes in its packaged equipment line.

B.A.C. Appoints 3 To Sales Posts

BALTIMORE — William E. Kahlert, vice president in charge of sales at Baltimore Aircoil Co., Inc., has announced the appointments of James O. Honeywell and John W. ("Chick") Overend as assistant sales managers, and Patrick J. Geraghty, Jr. as sales engineer.

Honeywell joined B.A.C. in 1957. For the past three years he has served as sales engineer.

Overend, who recently joined B.A.C., served eight years as district sales manager for Superior Valve & Fittings Co., and four years as assistant sales manager in air conditioning at Koppers Co., Baltimore.

Geraghty has been a sales-service representative for Kaiser-Aluminum & Chemical Corp. for the past five years.

TWIN DUCT AIR BLENDER for high velocity double duct air conditioning systems is adaptable for ceiling (below) or under window (above) installation. Blenders operate without motors, piston separators, or mechanical linkage.

Worthington--

(Continued from Page 1, Col. 3)

double-duct air conditioning systems. Adaptable for ceiling and under-window installation, the blenders operate without the use of motors, piston separators, or mechanical linkage.

"The new air blender has many system advantages based on its design," the company said. These include simple operation through a single fan system to heat, cool, clean, humidify, and dehumidify the air. All heating and cooling equipment is centralized in one place and can be used for both interior and exterior zones.

The unit is claimed to have a space-saving advantage through the use of small, round, high velocity ducts.

"And with no water or steam lines, electrical connections, fans, or filters except at the central unit, the system is necessarily much less complicated," Worthington asserted. "During intermediate seasons, 100% outside air can be used affording more efficient operation."

The packaged multizone unit, called the "Multi-temp" CMC Series Package, is immediately available and combines packaged multizone design features with engineered application flexibility, it was indicated.

"The new series consists of three models having a cooling capacity range of 30 to 35 tons,

He's sweating out a scale problem

He's really sweating—tons of meat in the freezer — and the refrigeration cooling water system is shut down because it's clogged with scale. He runs a good chance of a heavy loss.

Refrigeration systems can gradually scale up and still perform reasonably well under normal conditions. But when the temperature goes up, scale gets in a knock-out punch, and the system is down — until it's cleaned.

Don't let this happen to your customers. Use Calgon® Scale Remover to *get* a system clean, and Micromet® Plates to *keep* it clean. Calgon Scale Remover works fast and is safe. It contains corrosion inhibitors for copper, brass, steel and aluminum.

Micromet Plates are ideal for controlling scale deposits. One charge will last a season in most systems. Self-feeding, Micromet Plates are simply hung in the water spray.

If the problem is water...
CALGON HAS THE ANSWER

More than 35 years of experience with water problems of all kinds . . . research facilities dedicated to a constant search for better water treatment chemicals and methods of treatment . . . analytical service and expert technical advice for every customer . . . and a full line of products backed by the Calgon name . . . all of these are at your service. Call on Calgon for help on any water problem.

Ask your refrigeration wholesaler about these quality Calgon products — Calgon Scale Remover, Micromet Plates, Calgon Algaecide and Biocide RP, Banox,® Ice Machine Cleaners and Treatment, Gas Leak Detector. Each one is a leader in its field.

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DIVISION OF HAGAN
CHEMICALS & CONTROLS, INC.

PATENTS

Week of Nov. 22 (Concluded)

2,960,844. REFRIGERATED SHOWCASES. Lester K. Quick, 1963 W. 6th Ave., Eugene, Ore.

1. A refrigerated chamber having a front wall and a back wall, said front wall being defined by a transparent door mounted on said chamber, a pair of ducts mounted adjacent said back wall in said chamber with one of said ducts extending forwardly towards said front door and terminating at a region above said front door, refrigeration apparatus in communication with said ducts. . . .

2,960,846. ABSORPTION REFRIGERATION APPARATUS. Wilhelm Georg Kogel, Stockholm, Sweden, assignor to Aktiebolaget Electrolux, Stockholm, Sweden.

1. In absorption refrigeration apparatus, an upright shell having an upstanding side wall and a top and bottom and insulation therein, a vapor-expulsion unit embedded in the insulation, said vapor-expulsion unit having at least one part in which vapor is expelled from solution by heating, a heating tube which is disposed in said shell and spaced from the top and bottom and also removed from the side walls, means heat conductively connecting the exterior surfaces of said tube and said part along a line which extends lengthwise of said tube. . . .

2,960,848. REFRIGERATING APPARATUS. Harvey J. White, Birmingham, Mich., assignor to General Motors Corp., Detroit, Mich.

1. A refrigerator including an insulated cabinet having insulated side and rear and top and bottom walls enclosing a compartment to be cooled, an insulated front door for said compartment, a refrigerant condensing means located alongside and adjacent to the outer surface of one of the side walls, a thin outer wall extending over and around and forming a duct for said condensing means alongside said one side wall. . . .

2,960,849. REFRIGERATING APPARATUS. John J. O'Connell, Dayton, Ohio, assignor to General Motors Corp., Detroit, Mich.

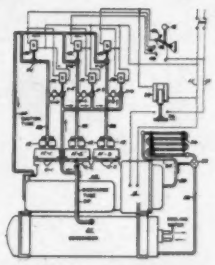
1. A refrigerator including insulated walls enclosing a food compartment to be cooled, a removable container within said compartment adapted to contain food having especial requirements for food preservation, an evaporator for cooling said food compartment, means for circulating air into heat transfer relationship with said evaporator. . . .

Editor's Note: Patents described here have been selected from the "Official Gazette" of the United States Patent Office. They offer only a brief summary of each invention. In some instances only the first part of the digest is presented.

2,960,924. AIR DISTRIBUTION CONDUIT SYSTEM FOR PORTABLE AIR CONDITIONERS. Frank S. Grott, 4012 Pinkney Road, Baltimore, Md.

1. In combination with a conventional window type, single room air conditioner having air inlet and air outlet passage areas, an air distribution attachment for selectively conveying the pressure discharged cooled air from said air outlet passage area to at least one remotely located room area comprising flexible and collapsible air impervious, light weight, plastic-like tubular conduit means of indeterminate length having detachable connection means at one end for removably securing said one end in surrounding air receiving relation to said air outlet passage area of said air conditioner. . . .

2,961,148. COMPRESSOR CYLINDER UNLOADERS. Arthur W. Courtney, Jr., Grottoes, Va., assignor to Westinghouse Electric Corp., East Pittsburgh, Pa.

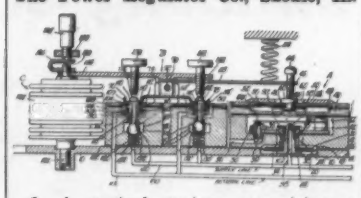


1. A control system for a cylinder of a refrigerant compressor, said compressor having a suction tube connected to its suction side, and having a discharge tube connected to its discharge side, said cylinder having a suction valve reeds, having an unloader cylinder, and having a piston in said unloader cylinder connected to said reeds, said piston being movable in one direction to move said reeds to open position, and being movable in the opposite direction to permit said reeds to move to closed position. . . .

2,961,149. OSCILLATORY COMPRESSOR. Robert R. Hull, Pasadena, Calif., assignor to Richard G. Markham, Solvang, Calif.

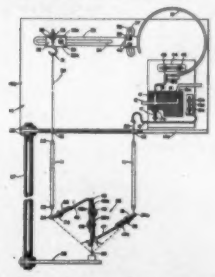
1. An oscillatory compressor comprising: an electro-magnet; a frame member attached to said electro-magnet; at least two spring means connected to said frame member; an armature connected to said spring means; a cup attached to said armature for movement therewith; plunger means fixed to said frame; an annular U-shaped flexible seal ring having a pair of coaxial annular legs and a web portion connected between one end of the legs, means for connecting one of said legs to said cup and for connecting the other of said legs to said plunger so as to enclose a compression chamber of variable volume therein; an inlet valve for admitting air into the compression chamber; outlet means from said chamber. . . .

2,961,162. REVERSIBLE AUTOMATIC THERMOSTAT. David H. Thorburn, Oak Park, Ill., assignor to The Power Regulator Co., Skokie, Ill.



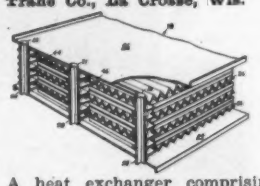
1. A control system comprising a first valve assembly, a second valve assembly, a first conduit supplying fluid under pressure to said first and second valve assemblies, a second conduit carrying fluid under pressure from said first and second valve assemblies, each of said valve assemblies being normally operative in a control position and being selectively operative into a shut-off position, temperature responsive means for operating said first valve assembly when in said control position between said control and shut-off positions to complete a connection between said first conduit and said second conduit and to supply fluid into said second conduit supply at pressures varying directly with variations in temperature and for operating said second assembly valve when in said control position between said control and shut-off positions to complete a connection between said first conduit and said second conduit and to supply fluid into said second conduit at pressures varying inversely with variations in temperature. . . .

2,961,164. HUMIDITY TRANSMITTER OR RELAY. Floyd B. Newell, Rochester, N. Y., assignor to Taylor Instrument Cos., Rochester, N. Y.



1. A humidity relay comprising a pair of elements adapted to change in dimension in response to change in relative humidity, such change being elongation or contraction depending on whether the relative humidity increases or decreases, said elements being arranged side by side in position to expand and contract along substantially parallel directional lines, a connector pivotally mounted and connected to said elements so as to define a double-armed lever; a baffle and a nozzle, one of said baffle and nozzle being connected to one of said elements remote from said connector and adapted to apply a tension force thereto tending to pivot said connector so as to tension the other of said elements. . . .

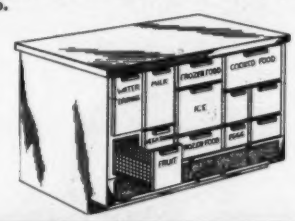
2,961,222 HEAT EXCHANGER. Alan G. Butt, La Crosse, Wis., assignor to The Trane Co., La Crosse, Wis.

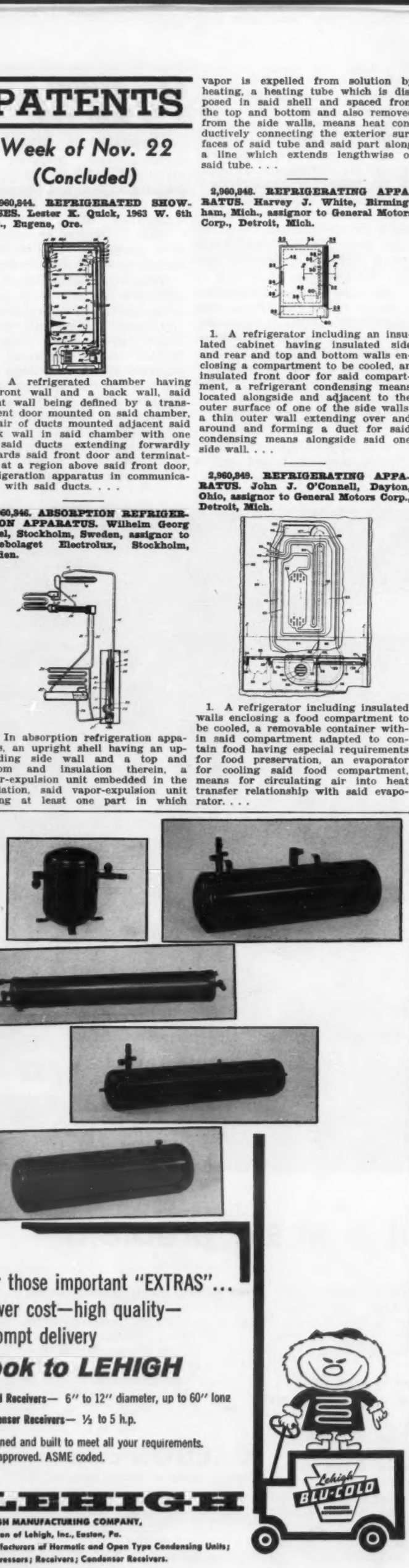


1. A heat exchanger comprising a plurality of substantially parallel, substantially flat envelopes arranged one above the other, a plurality of pegs secured to said envelopes at their peripheries and having their longitudinal axes normal to said envelopes, said pegs having longitudinal flanges extending outwardly from said envelopes and being adapted for attachment to headers, first closure strips wrapped around said pegs and extending along and closing portions of the peripheries of said envelopes to define with said envelopes a plurality of first inlet openings arranged one above the other and to define with said envelopes a plurality of first discharge openings one above the other. . . .

DESIGN

189,334. REFRIGERATOR. Pauline E. Garth, 3114 E. 63rd St., Kansas City, Mo.





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lower cost—high quality—
prompt delivery

look to LEHIGH

Liquid Receivers— 6" to 12" diameter, up to 60" long

Condenser Receivers— ½ to 5 h.p.

Designed and built to meet all your requirements.
U.L. approved. ASME coded.

LEHIGH

LEHIGH MANUFACTURING COMPANY,
Division of Lehigh, Inc., Easton, Pa.
Manufacturers of Hermetic and Open Type Condensing Units; Compressors; Receivers; Condenser Receivers.

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RATES for "Positions Wanted" $7.50 per insertion. Limit 50 words. 15¢ per word over 50.

RATES for all other classifications $10.00 per insertion. Limit 50 words. 20¢ per word over 50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other address by actual word count. Please send payment with order.

POSITIONS WANTED

REFRIGERATION, AIR CONDITIONING and heating technician-graduate of Greer Technical Institute, 2230 S. Michigan, Chicago, Ill., and Allied Institute of Technology 1342 S. Michigan, Chicago, Ill. Single, 41 years of age, some experience, Air Force veteran, some experience, will relocate. G. W. BAYLES, 1021 Bedford Avenue, S.W., Canton 10, Ohio.

SERVICE MANAGER, service engineer's degree, age 50, desires connection with small company. Trade school graduate, 16 years' experience,—domestic, small commercial field. Complete programming, factory field training. Recent member R.S.E.S. Service Managers Club. Address inquiry: E. G. STEGMANN, 304 N. Winter St., River Falls, Wisconsin.

EXCELLENT REFRIGERATION Service Engineer desires position in America. 26-year-old Haitian, fluent in English, French and Spanish. U.S. training at Coyne Electrical School and Greer Shop Training, Inc., both located in Chicago, Illinois. Previous U.S. employment at The Pullman Company and Central Air Conditioning Service, Inc., also in Chicago. BOX A6729, Air Conditioning, Heating & Refrigeration News.

SERVICE & applications engineer, 38 years old, well educated, would like position with manufacturer. 10 years' experience with service and applications, taught heating and air conditioning. College level. 8 years' experience as service manager and installer of heating and air conditioning equipment. Willing to travel states of Michigan, Ohio and Indiana. BOX A6731, Air Conditioning, Heating & Refrigeration News.

POSITIONS AVAILABLE

OWNER OF small shop in Miami, Fla. is physically incapable to personally operate his business to its full capacity due to automobile accident. Need man to re-organize existing shop for systematic production of repairs to room air conditioners. Must have business acumen with practical experience to diagnose, service and install units. Opportunity commensurate with ability to succeed. MR. SLOANE, 5211 S.W. 4th Street, Miami, Florida.

2 HIGH CALIBER salesmen wanted by well established refrigeration manufacturer. Must be free to travel calling on grocery trade and dairies. Grocery trade experience helpful. Will train. Possible earnings $20,000. yearly. Liberal draw. Give resume. Reply confidential. BOX A6730, Air Conditioning, Heating & Refrigeration News.

EQUIPMENT WANTED

CASH FOR Tecumseh compressors S 7R16, S 7N16, JE 300, FB 500, and other models. Advise B/M, electrical accessories, quantity, price. BOX A6722, Air Conditioning, Heating & Refrigeration News.

EQUIPMENT FOR SALE

NOTICE: DISTRIBUTORS, dealers, servicemen, users refrigeration equipment—repair parts available all models Baker ammonia and Freon compressors. Also models 6B and F6B ammonia compressors. We are exclusive Baker export sales office. Manufacturers' export agents refrigeration, air conditioning and allied equipment. THE KEISER COMPANY, 1555 W. 79th St., Chicago 20, Illinois.

ATTENTION REFRIGERATION Servicemen. Send for catalog listing values in refrigeration and air conditioning parts, relays, capacitors, compressors. Savings up to 50%. WALTER W. STARR, 2833 Lincoln Ave., Chicago 13, Illinois.

INSULATING BLOW truck $3,800. 1959 model 6B59, all alum. body with International Watercooled motor mod. C-106-S9J, starter and generator, Molly Machine Co., Supermatic Woolmaster blower, 50 ft., 2-½" I.D. Fley hose, all in excellent condition. THEODORE M. WILLIAMS CO., 979 Volusia Ave., Daytona Beach, Florida.

FAMOUS MAKE national brand running capacitors: 20 mfd x 370V, $2.75 ea. rect; 10 mfd x 350V $1.25 ea. 5 mfd x 330V .80 ea. Reply to BOX A6728, Air Conditioning, Heating & Refrigeration News.

BUSINESS OPPORTUNITIES

WANTED—DEALERS, agents and distributors to carry our newly developed window type air conditioner covers. It is no longer necessary to carry 99 different sizes. Our "storm" cover is made from a heavy gauge rubber plastic and will fit any make air conditioner up to 1 ton, secured with two heavy straps and buckles. Simple to install. Send $2.50 for sample. STORM PRODUCTS, 41 Greenwich St., Hempstead, L.I., New York.

MISCELLANEOUS

ATTENTION—SERVICEMEN. Get the most complete catalog of Chicago replacement valve plates and shaft seals. Write or phone for catalog 809 and name of your nearest wholesaler. CHICAGO VALVE PLATE & SEAL COMPANY, 6960 W. Grand Avenue, Chicago 35, Illinois, Phone MErrimac 7-5666.

AIR CONDITIONER TESTING with the most complete testing facilities in the Midwest, we are in a position to do custom testing and rating of most all models of air conditioning equipment. All testing done on a "cost plus-hourly basis". We also have surplus testing equipment for sale or lease. Phone or write: Howard Bentley, c/o WESTERN SUPPLY COMPANY, Hutchinson, Kansas.

Direct Mail Advertising

How Dealer Can Use It To Broaden His Market, Including Pointers On How To Run a Successful Local Campaign

By Norman Reitman, Advertising and Sales Promotion Mgr., Typhoon Air Conditioning Div., Hupp Corp.

The forward-looking air conditioning dealer, interested in broadening his market and using the mass-production techniques of advertising to make more sales, will do well to base his expansion on a sound program of direct mail advertising.

Within recent years, direct mail advertising has forced its way to a place second only to newspapers in actual advertising volume.

It's an ever-growing trend based primarily upon the effectiveness of selective advertising directed to identified prospects; those people known to be able to buy and thus recognized as most likely to buy.

Direct Mail Can Be Controlled Easily

Direct mail can be directed to specific individuals or markets with greater control than any medium.

Direct mail can be sharply personalized. It is intimate and individual with its "Me-to-You" approach. It gets extremely high readership because it is not forced to compete for attention with a mass of other ads and headlines.

Direct mail can tell the complete story. There are no practical limitations on space or format. It can show more of the products and services. Direct mail can be timed exactly, both for departure and receipt, to get you maximum results.

Direct mail lends itself to greater flexibility in materials and processes than any other type or form of advertising medium.

Direct mail can often be the only solution to your advertising problems. Wherever products and services are sold, whenever advertising must work effectively to get the greatest consumer impact, the major, or even the exclusive advertising medium, may often be direct mail.

Direct mail advertising offers certain undeniable advantages that indicate its use for the most effective, inexpensive, and practical form of business promotion.

It Is Not Intended To Do Direct-by-Mail Selling Job

Direct mail advertising provides the one good way to get your sales message into the hands of a large number of selected prospects at a relatively low cost. It is not intended to do a direct-by-mail selling job. It is used largely to canvass or determine the "hot" prospects and to serve as a door opener for salesmen to do the final selling job.

There has been a strong misconception that direct mail is not opened and read and that most of it ends up in the wastebasket. A lot of it does end up in this way, but it is almost always opened. Natural curiosity causes the average person to check his mail with considerable interest.

Direct mail programs designed for maximum response have produced up to a 10% inquiry return. Many times when weather, economic, and local conditions are all favorable, this percentage can be much higher. These condition-factors are very important to direct mail, and if not considered can result in the failure of a program.

The success of any direct mailing program depends upon the completeness and accuracy of the mailing lists employed. Therefore, expert care in the selection of a mailing list is imperative.

One important fact to remember is to direct the mailing piece to the person who makes buying decisions. If you are unable to obtain the executive's name, send it to the attention of the general manager.

Sources of Mailing Lists

Excellent mailing lists are easily obtainable from the following sources:

- City directories.
- Telephone directory, Yellow Pages.
- Credit books (available through credit associations and banks).
- Chamber of Commerce, municipal and county records.
- Club and organization rosters.
- Mailing list brokers.
- Newcomer leads and utility companies.
- Your own customers.

Keeping your mailing list up to date is another important function to insure the success of any direct mail program. A periodic check of correct address listings can be made by your local post office.

The use of "Form #3547, requested," which is printed on your direct mail pieces tells the post office that you will pay them 5 cents for each form #3547, and full third class postage for each piece returned with reason for non-delivery. This is a small price to pay for keeping all addresses on your list up to the minute, and removing costly deadwood.

To give your direct mail program the best possible chance for success, do not mail during any periods when local conditions would be adverse to the success of the program.

Mail In Advance of Season

Mail in advance of the seasons. Anticipate good periods. Avoid first of the month mailings, except for statement enclosures. Do not mail to be received over weekends and holidays, and do not mail when any large local campaign is in progress.

Try to develop a good addressing system. Hand-written addresses are very good. Individually typed addresses are just as good. These services are available from letter shops or you can develop your own with part-time high school students or housewives. There are many other ways such as addressing equipment that use file plates and stickers, etc.

Good direct mail advertising is more than sporadic mailing of advertising material. Catalog and other literature are useful in generating interest but the ultimate goal is to obtain a response from the recipient—either an answer to the mail or a better reception when the mail campaign is followed up by a personal call.

Direct mail material should also be tailored to the prospect's interest. Mailings should also establish continuity so that the recipient will connect the second and third trys with the first. This gives a valuable accumulative effect to the campaign.

Be Prepared To Handle Returns

The handling of returns or inquiries should be carefully considered at the time you plan your mailing. Plan your program to bring in prospect returns at a rate you can handle quickly and conveniently. One mailing seldom brings full results.

Follow-up mailings should be planned and spaced properly. Three mailings spaced a week or two weeks apart usually get the most impact and response.

Personal calls or phone calls should be utilized even after only one mailing, if you get a sudden weather break or if some other favorable circumstance should materialize.

Needless to say, follow-up calls should be made immediately after any return or inquiry for the best results from your mailing. Be sure to remove from your active mailing list the names of all persons who reply to the first mailing, and advise your mailing house to save these cards for future mailings.

A personal call is the best way to follow-up an inquiry. It will retain the interest that was generated by the direct mail.

FILL OUT THIS COUPON FOR A FREE ESTIMATE.

HOW MUCH WOULD IT COST TO AIR CONDITION MY PREMISES?

Here are some facts about my premises on which to base your free estimate. I understand that by sending this card I am under no obligation whatever.

BUSINESS: .....

The over-all size of my business premises is approximately .....square feet (roughly, the width times the length).

(Address goes here—automatically addresses Return Card.)

FREE-ESTIMATE coupon is used in three Typhoon campaigns, each consisting of three mailings. One is directed to commercial establishments, one to industry, and one to homeowners. Designed for mailing ten days apart, they give a complete story on the value of the product for sale and provide the return card for immediate response.

BUILD YOUR BUSINESS ON $43.00!

Install • Service • Find and Fix Leaks with the

PREST-O-LITE

Refrigeration and Air Conditioning Outfit

This single compact kit costs only $43, yet contains every essential piece of equipment for your work. You get three interchangeable open-flame stems to provide the right air-acetylene flame for soldering, brazing, or heating. Fit the sensitive leak detector stem to the same torch handle, and you can pinpoint the tiniest halide gas leaks—as little as 100 parts in 1,000,000 parts of air. Compare that with soapy water!

In one sturdy carrying case, the kit also includes an adjustable gas pressure regulator, torch handle, and hose—everything for the installation, repair, and everyday maintenance of all types of refrigeration and air conditioning systems. See your local *Prest-O-Lite* dealer. Or write Linde Company, Division of Union Carbide Corporation, 270 Park Avenue, New York 17, N.Y.

LINDE COMPANY — UNION CARBIDE

"Linde," "Prest-O-Lite," and "Union Carbide" are registered trade marks of Union Carbide Corporation.

Comfort-Aire AIR CONDITIONING

Self Contained Air Conditioners

Four full capacity models of 2, 3, 4 and 5 h.p. for residential and commercial applications. Smart in appearance and design proven, they allow complete flexibility of installation. Large coil surfaces, bonderized cabinets, Tecumseh compressor, capillary system and other quality features provide a Comfort-Aire owner many years of quiet, dependable operation.

Remote Air Conditioners

Available in the same size range as self-contained models, the split systems offer a large choice of evaporator-blower units and coil sections. The compact, efficient matched compressor units feature oversized condensers, low velocity horizontal air flow and Tecumseh compressors. Comfort-Aire matched systems are easy to install, quiet in operation and weather proofed to provide years of trouble free performance.

Also Available in Heat Pump Models

Dehumidifiers - Portable Room Air Conditioners - Through-the-Wall Air Conditioners - Furnaces - Air Cooled Remote and Self Contained Air Conditioners - Air Cooled Remote and Self Contained Heat Pumps

HEAT CONTROLLER, INC.

1900 Wellworth Ave. Jackson, Mich.

To See the Industry In Action EVERY WEEK

Keep up-to-date on what's going on in your industry. You'll see action weekly in AIR CONDITIONING, HEATING & REFRIGERATION NEWS. Covers latest news and gives you top how-to-do-it reports on residential, commercial, and industrial air conditioning, heating, and refrigeration for contractors, dealers, consulting engineers, distributors, servicemen, and manufacturers. Read the industry's only newspaper every week—you'll profit by it—only $6.00 per year, 52 issues (U.S. and Canada). Foreign: $10 per year.

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City..... Zone..... State.....
IMPORTANT: Company's Type of Business.....

Mathes--

(Continued from Page 1, Col. 1)

said. He added that no change in Mathes personnel is contemplated and that "Robert B. Starnes, who has been with Mathes since its inception, has agreed to remain and head this division."

The agreement of sales was signed in Cleveland by William P. Lennon, president of Republic-Transcon, and Dudley G. Layman, vice president and director of Glen Alden.

In exchange for Mathes, Glen Alden will receive 750,000 shares of Republic-Transcon common stock and a long-term 8½-year note for $2 million bearing 4% interest.

Republic-Transcon is listed on the American Stock Exchange (RTI) and Glen Alden on the New York Stock Exchange.

On completion of the transaction, Republic-Transcon will have 2,560,913 shares of common stock outstanding out of an authorized 3,000,000 shares. Present management will retain substantial control, with Glen Alden a 30% stockholder.

After clearance with the Securities & Exchange Commission and the American Stock Exchange, terms of the acquisition will be presented to shareholders of Republic-Transcon for ratification as soon as possible, Stevens stated.

The Mathes plant in Marble Falls, Texas, will be the sixth facility for Republic-Transcon Industries, other plants being in Los Angeles, Erie, Pa., Portland, Ore., Chicago, and Dallas.

Through its Republic Appliance Div., the company manufactures and sells gas and electric glass-lined water heaters, gas and electric clothes dryers, garbage disposals, Hammel furnaces, and other appliances.

Texlite, Inc., Dallas, a wholly-owned subsidiary, manufactures Texwall porcelain-enamel building wall panels and is one of the largest manufacturers in the world of plastic and porcelain-enamel outdoor signs, it was stated.

Republic - Transcon estimated 1960 sales were about $17 million, up substantially from 1959 sales of $13 million. Per share earnings during 1960 were estimated to be about 70 cents, compared with 32 cents (adjusted) for 1959.

Mathes, during 1958, 1959, and 1960, had aggregate sales in excess of $30 million, according to the announcement. The company normally employs about 500 people.

Central Residential Sales Up In Utah Area

SALT LAKE CITY — Dealer sales of central residential air conditioners in the areas served by Utah Power & Light Co. and its affiliates, Telluride Power Co. and The Western Colorado Power Co., rose to 316 in 1960 from 146 in 1959, according to a utility report.

Residential heat pump sales were up, too, totaling 16 last year, compared to 6 the year before. Sales of room air conditioners, however, declined to 779 from 1960 from 1,017 in 1959.

RACCA To Launch Concerted Drive for Members In All Areas

CHICAGO — The Refrigeration & Air Conditioning Contractors Association (national) is preparing to embark on a concerted drive for new members in all sections of the nation.

This was announced following RACCA's second quarterly board of directors' meeting, held at the Conrad Hilton hotel here just prior to the ASHRAE exposition.

The drive will be under the direction of Warren W. Farr of Cleveland, newly-appointed chairman of the Membership Committee and a charter member of RACCA.

Announcement of other committee-chairman appointments made by President Walter McCarty since his election last November also was made. These include:

Advisory Committee — Al Hanson, Los Angeles; Constitution & Bylaws — A. M. Palen, Minneapolis; Finance & Burget — R. S. Lafferty, Miami; Joint Activity & Labor — Harvey O. Miller, Chicago; Manufacturer & Wholesaler Relations—Daniel M. Brown, Chicago; 16th Annual Convention—Al Hanson.

At the directors' meeting, the many agenda items directed toward the continued growth of the association, and relationships and meetings with allied groups in the industry, were equitably resolved, according to McCarty, because of the attendance of twelve directors from all sections of the United States.

Acquit Salesman --

(Continued from Page 1, Col. 4)

acquitted salesman told the NEWS, that the building was safe for occupancy and use.

The attorney-general's office was apparently unable to prove that Markowitz had attempted to pass himself off as a licensed engineer; there were no drawings or specifications bearing the defendant's signature, although some testimony implied that such documents had existed and had disappeared.

Markowitz stated that the judge instructed the jury to "assess the charges in laymen terms," and that the jury was out for "only half an hour."

Raymond Mirrer, a professional engineer and a lawyer, serves on the engineering society's ethical practices committee. Mirrer told the NEWS, "The society has been wanting a test case for a long time; justly they feel that the line of demarcation between selling and engineering of air conditioning must be defined.

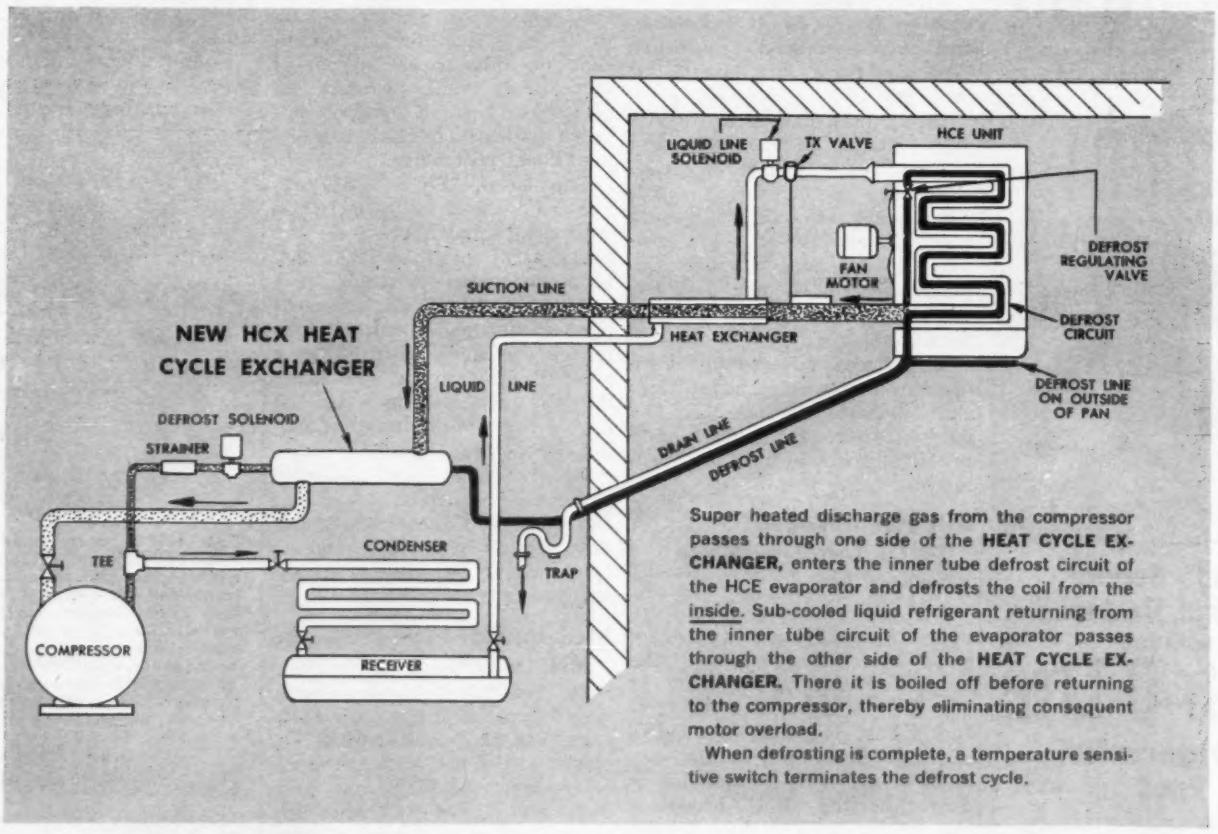
"My own opinion on the Markowitz case, however, was that there was insufficient evidence to make this the test case," the engineer-lawyer offered.

Mirrer suggested that even the task of making a load calculation should be checked by a licensed engineer, "to protect the customer and the contractor legally." He said there may be need for a code defining areas of responsibility in air conditioning installations.

Mentioned during the trial was the problem of companies involved in interstate commerce. The laws applying to the practice of engineering in other states by a firm licensed elsewhere apparently make for some confusion.

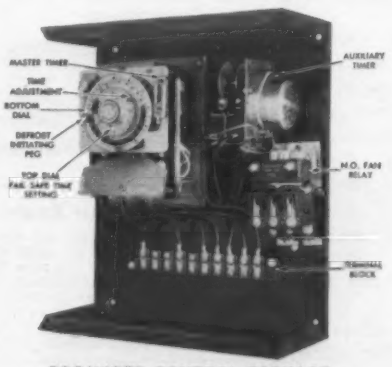
REVOLUTIONARY NEW

HEAT CYCLE DEFROST SYSTEM



Super heated discharge gas from the compressor passes through one side of the **HEAT CYCLE EXCHANGER,** enters the inner tube defrost circuit of the HCE evaporator and defrosts the coil from the inside. Sub-cooled liquid refrigerant returning from the inner tube circuit of the evaporator passes through the other side of the **HEAT CYCLE EXCHANGER.** There it is boiled off before returning to the compressor, thereby eliminating consequent motor overload.

When defrosting is complete, a temperature sensitive switch terminates the defrost cycle.



PRE-WIRED CONTROL PACKAGE
TIME-TEMPERATURE TERMINATION

- TIME INITIATED—TEMPERATURE TERMINATED—
- PREVENTS RETURN OF LIQUID TO COMPRESSOR.
- ELIMINATES MOTOR OVERLOADING (Resulting from high back pressure).

Here at last is a simple, *sensible* low temperature defrost system!

As a leading compressor and coil manufacturer, Dunham-Bush understands especially well the problems which can develop in low temperature defrost systems.

The company realized, for example, that the return of refrigerant back to the compressor in liquid state is a major cause of compressor malfunction. Accordingly, the Dunham-Bush HEAT CYCLE Defrost System was specifically designed to *eliminate* this troublesome and costly problem—while guaranteeing fast and efficient defrosting.

Capacities from 4,500 to 72,000 BTU/hr @ 10° T.D. Request Bulletin #5026.

IF ELECTRIC DEFROST IS PREFERABLE NEW DUNHAM-BUSH 'ED' SYSTEM NOW AVAILABLE

'ED' Electric Defrost Systems feature exclusive Inner-Fin coil construction of evaporator specially designed heater cable and new completely automatic time initiated—temperature terminated control package. Models from 4,500 to 72,000 BTU/hr @ 10° T.D.

DUNHAM-BUSH

DUNHAM-BUSH, INC.

WEST HARTFORD 10, CONNECTICUT, U. S. A.

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